ENGINEERING NEWS-RECORD

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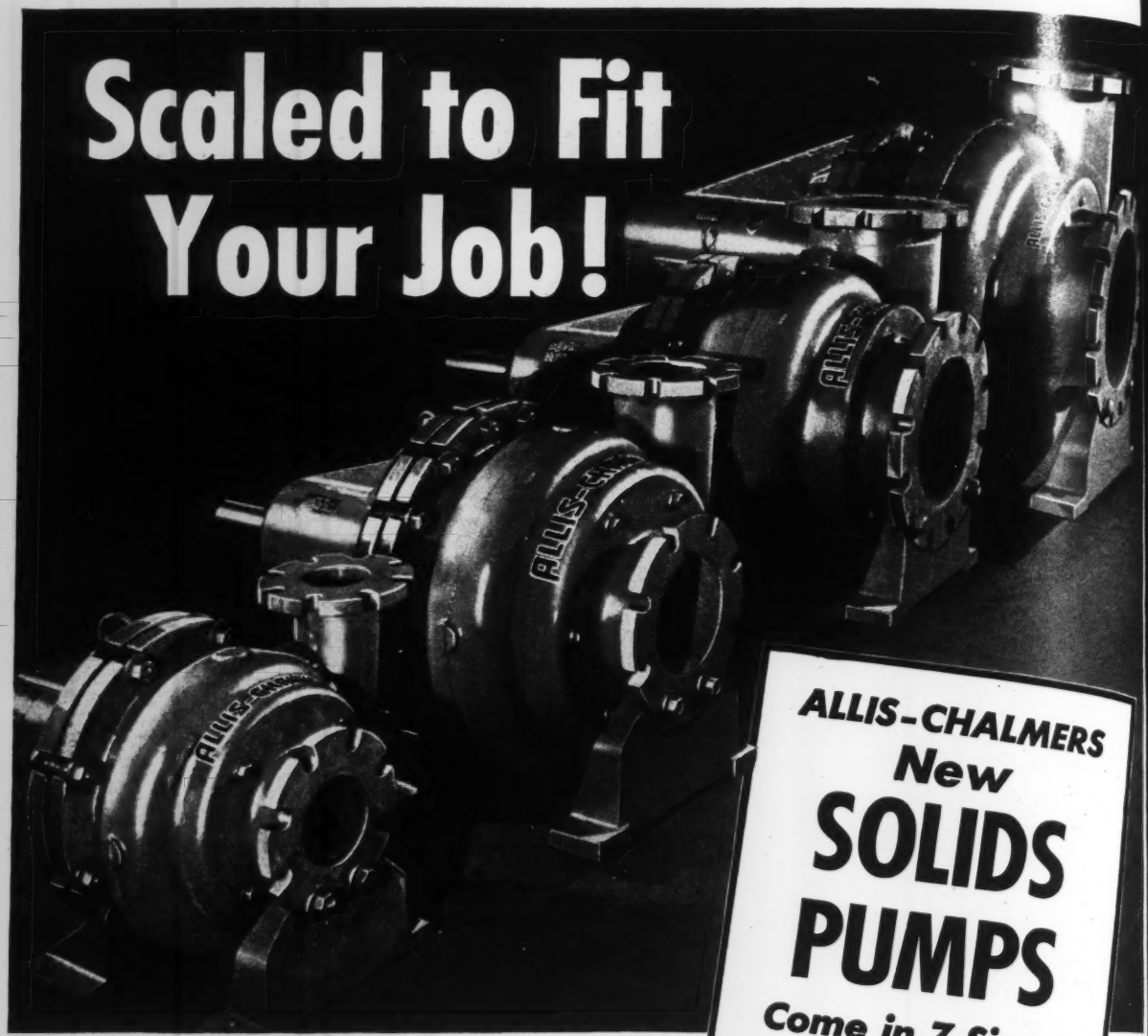

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News of the Week

ENGINEERING NEWS-RECORD • FEBRUARY 13, 1947 • VOLUME 138 • NUMBER 7

Local public works plans total over $5.6 billion

Federal Works Agency reports rise of $600 million in federal-aided planning last year—Planning costs found to be below original government estimates

The nation's backlog of local public works projects being planned with the aid of funds provided by the federal government increased by more than $600,000,000 during the last half of 1946, to bring the value of all works in the planning stage—including those not financed by the government—to more than $5,600,000,000.

Submitting a year-end report for 1946, the Federal Works Agency's Bureau of Community Facilities said last week that works being planned with federal aid now total $1,529,211,000, and planning without such U. S. aid is more than $4,100,000,000. These figures do not include the extensive highway construction projects being planned with the assistance of the Public Roads Administration.

During the 6-months period June 30 to Dec. 31, 1946, covered by the report, $20,141,000 in federal funds was advanced by the facilities bureau. This amount brought the total of advances by the bureau from the start of the program in 1944 to $46,000,000. Statisticians estimated that the $15,000,000 remaining available to the bureau as 1946 ended might finance preparation of plans for an additional $570,000,000 of work by the local groups.

Planning costs low

An analysis of the report reveals that the preparation of plans is costing only about 3.8 percent of the estimated construction cost—with the federal government advancing an average of 3 percent of that figure. When Congress was working on that part of the War Mobilization and Reconversion Act of 1944 authorizing assistance to state and public works groups, it was estimated that the cost of planning to the U. S. would be about 5 percent of the total construction cost.

Because the planning cost has proved to be considerably less than the estimate, the bureau apparently will be able to assist in the planning of a much greater backlog of work.

It should be noted that the advances to local groups are to be repaid, without interest, when the projects are actually placed under construction. So far, about a quarter-million dollars has been returned to the Treasury under terms of this provision.

Sanitation work biggest

A breakdown of the report on U. S.-aided planning shows that sewerage, water supply, and sanitation projects account for the largest single figure.

Construction cost of the projects of this type is estimated at almost $700,000,000, and planning cost is 3.4 percent with 2.6 percent supplied by the federal government.

School and other educational facilities account for nearly $360,000,000 of the total with the planning cost at 4.3 percent, including 3.9 percent from federal funds. Hospitals and health facilities total $87,000,000, this planning costing 3.1 percent of which 2.9 percent is federal aid. Other types of public buildings planned are listed at $160,000,000 with planning costing 4.1 percent, including federal funds to the amount of 3.5 percent.

Highway and street work totals $54,000,000, on which the bureau is spending 3.4 percent for planning.

The lowest planning cost revealed is that of 2.3 percent, including 1.5 percent from federal funds, in planning $42,000,000 of bridges and grade-separation construction, although bureau engineers believe that the local groups on this type of projects are failing to

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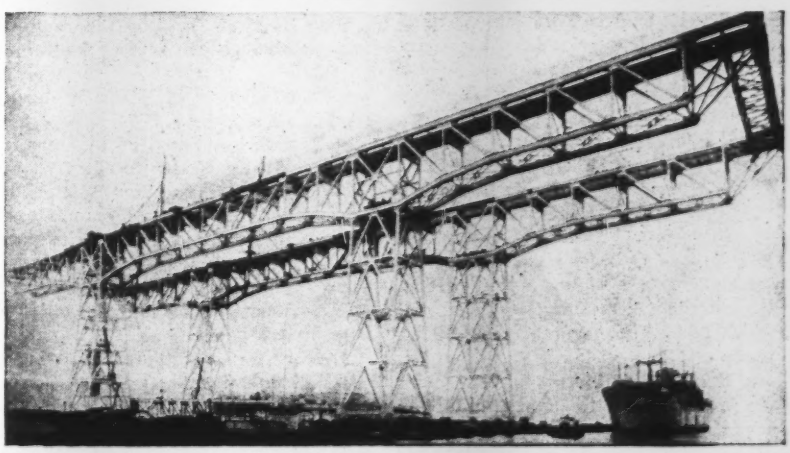

***Biggest Crane Nears Completion**—Steel work on this record-size bridge crane is now nearing completion at the San Francisco Naval Shipyard at Hunter's Point, Calif. Next problem facing navy engineers is installing two travelling cranes on the 730-ft. runways. Built for use in such ship repair work as replacing battleship guns, the 207-ft. high assembly will carry two cranes that can operate separately or in tandem with a maximum capacity of about 500 tons. Dimensions of the crane were given in ENR Sept. 27, 1945, vol. p. 406.*

NEWS IN BRIEF

In telegraphic form, here are latest news developments on the engineering and construction front during the week.

Construction — A $25,000,000, two-year building construction and repair program for 25 state institutions in *Indiana* has been proposed by Gov. Ralph F. Gates . . . FWA up to Jan. 20 has advanced $1,419,000 in federal funds to enable *Baltimore* and various *Maryland* counties to launch a state-wide public works program . . . A $200,000 bond issue for construction at the Payne County Masonic Hospital at *Cushing, Okla.*, has been approved by voters . . . A building permit for $2,000,000 has been issued at *Houston, Tex.*, for the 14-story Herman Hospital Estate office building at the city's Medical Center . . . Bids are being received for a $5,000,000 ethylene plant for the Dow Chemical Co. at *Freeport, Tex.* . . . At *Indianapolis, Ind.*, the Meadowbrook Corp. is constructing under the G. I. program 629 residential units . . . Frederick Brown will build a 12-story office, show room and store building at 4 W. 58th St., New York City . . . The Turner Construction Co. has been awarded a contract by Pratt & Whitney Aircraft Division of United Aircraft Corp. for a dynamotor and refrigeration building at *East Hartford, Conn.*

Highways—Between VJ Day and the end of 1946 the *New York State* Department of Public Works awarded nearly 150 contracts totaling about $56,000,000. Included are 450 miles of highway reconstruction . . . *Harris County, Tex.*, will use recently-approved bond issue funds as follows: $920,000 to augment $7,600,000 already available for county road and bridge construction; $1,080,000 for new county lateral roads; $1,500,000 to buy more right of way for important state highways under construction in the coming five years; and $3,500,000 to augment $10,000,000 already available in local, state and federal funds to build two tunnels under the Houston Ship Channel at Spillman Island and Pasadena . . . Construction on the Shelby Street underpass in *Indianapolis, Ind.*, is scheduled to start April 1 . . . Tentative plans for an elaborate highway system, including a high-speed freeway through the center of the city, have been prepared by the *Providence, R. I.*, City Planning Commission.

Water supply and sewers—City council at *Henderson, N. C.*, has called a referendum for March 11 on a proposed $100,000 bond issue for sewer extensions, while at *Burlington, N. C.*, there will be a referendum for March 25 on a $1,500,000 bond issue for a water filtration and pumping plant, sewer outfalls and extension of mains for water and sewers.

To resume work soon on Dewey Dam, Ky.

Work on the Dewey Dam, near Paintsville, Ky., a project which was halted last December, will be resumed about March 1. An official of the Evans Construction Co., Evansville, Ind., said he was canvassing homes and hotels for rooms for at least 250 workmen. The dam is being built on Johns Creek, in Floyd County.

The company maintains offices at Van Lear, but only a skeleton force is being employed on the site during the winter months.

Local public works top $5.6 billion

(*Continued from page* 1)

include all of their planning charges.

Other types of federally-aided construction with planning cost include: Airports, $23,000,000 and 3.9 percent; parks and recreational facilities, $50,000,000 and 4.1 percent; and miscellaneous public facilities, $84,000,000 and 4.8 percent.

Report has gloomy side

Despite the great increase in the amount of work planned, the report revealed that progress has been discouraging in many ways. At year's end plane had actually been completed (with federal aid) for only about $113,000,000 of construction; the transfer of projects during the last half of the year from the design to the complete stage was slow.

Slow progress is also reported for the work being done without federal assistance. The increase for this type of work totalled only $198,000,000 during the last six months of 1946.

A complete absence of planning in many localities is also revealed.

Of the 12,631 governmental units reporting on the status of planning, 59 percent reported no plans in either the completed or design stage. Although these units are chiefly counties and small towns, they include 273 cities of over 10,000 population.

Heavy concentration of projects planned without federal aid in a few of the large states was also reported. Five states with about one-third of the country's population—New York, Illinois, Pennsylvania, California and Michigan —reported about two-thirds of all plans brought to the completed or design stage without federal funds.

Greater progress desired

FWA officials said that the planning progress is still far below a "safe" margin. Bureau engineers commented:

"The volume of planning must be considered primarily with respect to its adequacy in meeting future needs. The initial objective, when this program started, was a reserve of non-federal public works amounting to $5 billions in construction costs, exclusive of federal-aid highway work.

"While real and substantial progress has been made, the original goal is no longer adequate. When the program was originally formulated, the costs of labor and materials were much lower than at present. These higher costs make the establishment of a planning program in terms of dollars extremely difficult. To effect stabilization of the construction industry, under present prices would require a larger dollar-volume of public works than considered when the program started.

"In addition, the heavy drains on the reservoir of fully-planned state and local public works must be considered, if an adequate reserve is to be steadily maintained. Many projects, long postponed, will be placed in construction as materials become available and prices are adjusted. As these public works are put into construction, the existing reserve will be to that extent decreased. The reserve should be replenished so as to maintain at all times an adequate shelf of planned projects."

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Favor $261 million low-level crossing to aid San Francisco-Oakland traffic

Army-Navy board recommends combination trestle, fill and tubes as solution for problem of second San Francisco Bay crossing

The immediate construction of a $261,000,000 combination low-level bridge, under-water tube and filled causeway to provide a second vehicular crossing of San Francisco Bay was recommended last week to the Secretaries of War and Navy.

The recommendation was submitted by a joint board of Army and Navy officers, headed by Brig. Gen. G. H. Davidson, which concluded public hearings on the matter at San Francisco last August (*ENR* Aug. 22, 1946, vol. p. 222, and Aug. 29, vol. p. 274).

Included in the board's report was a recommendation that consideration be given to a long-range integrated rapid transit plan for the Bay area, including rail tunnel under the bay between San Francisco and Oakland.

The low-level crossing urged would be of 6-lane width and would connect San Francisco in the vicinity of the foot of Army Street, with Fifth Street in Alameda, a cross-Alameda expressway, and a 4-lane tunnel under the Oakland Estuary to the vicinity of Fifth, Clay and Washington streets in downtown Oakland. The main crossing from San Francisco to the Alameda shore would be slightly over six miles in length.

Trestle, tube and fill

The western end of the crossing would be a trestle, 15 ft. above mean low water, and about 3,600 ft. long.

At the eastern end of this initial trestle-type structure, the roadway would lead into an under-water tube that would be 6,400 ft. long and with its central portion allowing a 50-ft. navigational clearance with the roadway at that point being 81 ft. below mean low water. At the end of the under-water section, the crossing would again become a trestle for 15,000 ft. The easternmost 7,000 ft. would be earth-fill, leading to the island of Alameda at Fifth street.

In Alameda, there would be turnoffs at the southern and northern sides of the island to divert local traffic, and then the 4-lane tunnel under the Oakland Estuary to Oakland.

Many plans considered

In studying the problem of constructing an additional bridge across the bay, the board said it had considered some 29 plans, boiling down this mass of data to three proposals: A bridge from Telegraph Hill to Oakland; one from Rincon Hill to Oakland roughly paralleling and quite close to the existing bridge, and the Army Street-Alameda crossing.

In forwarding its recommendations, the board said that the bridge suggested had many advantages, and that, while "tangible economic considerations" favor a central crossing paralleling the existing bridge, the "intangible economic benefits" which would accrue through construction of the recommended span would outweigh other considerations.

Advantages cited

Advantages cited included: Creation of less congestion in downtown districts; making the bay crossing facilities less vulnerable in wartime; provision of traffic relief for Alameda, and the fact that it is the only acceptable solution providing any possibility of future expansion to include railroads.

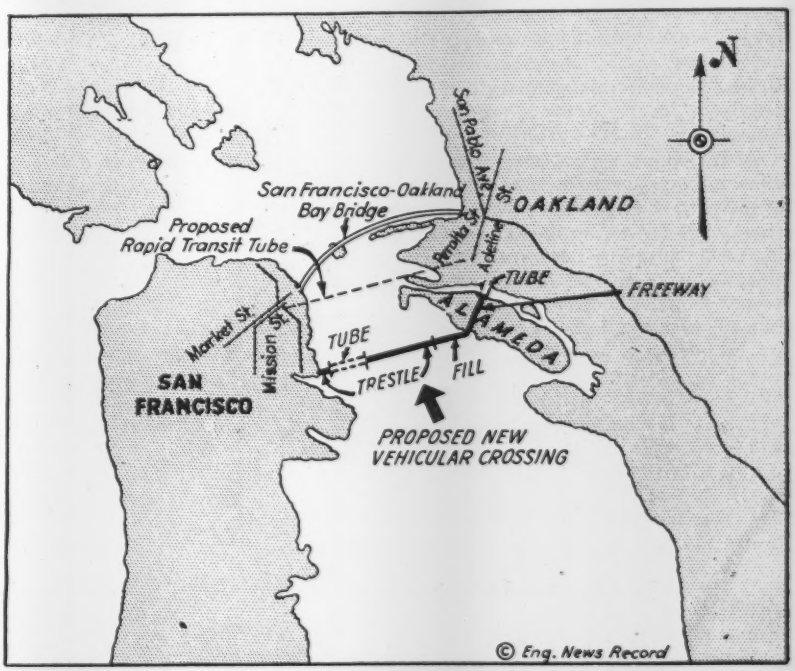
Commenting that it is infeasible to construct a new bridge across the bay "every time the traffic situation becomes desperate", the board suggested that consideration be given to a rapid transit system for the bay area.

Without going into great detail on the rapid-transit plan, the board suggested that eventually a tube be built from the vicinity of Third and Howard streets in San Francisco to Twelfth and Magnolia streets in Oakland, and that on the San Francisco side a loop subway be built to give rapid transit service to the downtown area.

Network of expressways proposed in Ohio

A statewide network of express highways to cost about $742,000,000, was proposed to the Ohio Legislature recently by Perry T. Ford, retiring State Highway Director.

The program would boost to more than $1,000,000,000 the cost of a 10-year program of construction and repair for the roads. While Mr. Ford previously had argued against a new network of super-highways, the inventory is based upon the idea of eliminating bottlenecks at cities.



***Solution for San Francisco**—To ease the pressing problem of providing more vehicular roadways across San Francisco Bay, a joint Army-Navy board last week recommended construction of a $261,000,000 low-level bridge and tunnel from the southern part of the city to Alameda, a freeway across Alameda and another tunnel under the Oakland Estuary. Also urged for future consideration was construction of a trans-bay subway tunnel.*

DEVELOPMENTS BEYOND U. S. BORDERS

Digested from reports by Engineering News-Record correspondents and the McGraw-Hill World News Bureau

Venezuela pushes work on housing projects—Seeks amendments to Britain's planning bill—Australia considers more hydro-power developments—Other foreign news

Venezuela—Nearly 1,000 workmen and their families at Maracaibo will shortly be moving into the government-built "Urbanizacion General Rafael Urdaneta"—said to be the first complete neighborhood housing unit completed in Latin America.

The $2,500,000 project is a 99-acre "superblock" development, patterned after similar projects in the United States, each small block having its own park. A school, a church, a swimming pool, outdoor movies, and markets at two entrances are included in the overall plan. Only one-fifth of the total area is occupied by buildings, the remainder being taken up by parks, gardens, streets and the patios which adjoin each dwelling unit.

The family units are planned for occupancy by workmen earning from $3 to $6 per day, and will sell for about $2,100 each, on a 20-year mortgage. General financing and construction of the project is being done by the Banco Obrero, a part of the Venezuelan Ministry of Works, many of whose activities are similar to the operations of the U. S. Federal Housing Agency.

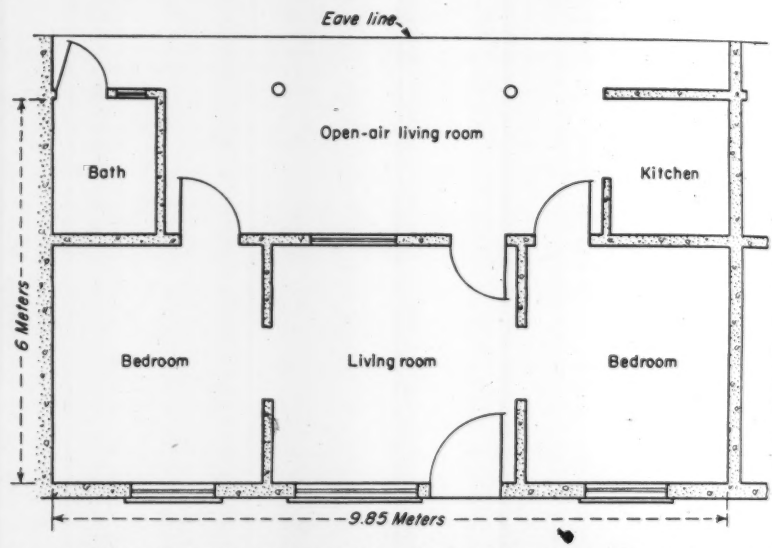
House plans simple

To keep down maintenance costs and allow more room in the fenced-in patio at the rear, the houses are set near the street. The front door opens into a living room flanked by a bedroom on each side. Both the living room and the bedrooms include hammock hooks sunk into the concrete walls to allow up to six hammocks to be hung at night for sleeping. Almost the entire rear half of the unit is taken up by a large room which has one side open to the patio, and serves as an outdoor living and dining room. At one end of this room is a small kitchen, and at the other a laundry room and bathroom. All the buildings are set at an angle to catch the prevailing breeze—important in a climate whose mean temperature is 86 deg. and where the humidity is high.

The houses are built of reinforced concrete and concrete block, made on the job. Roofs are corrugated asbestos, laid over a wood frame; the roof overhead is faced with a pressed hardboard. Floors are concrete colored a dark red, and shutters are used in place of glass windows.

Despite the fact that all 1,000 units are identical, variety has been achieved through design and layout—the main avenues in the development being laid out in parabolic curves, and the houses placed at angles to each other. In addition, pleasing appearance has been gained through the use of color, and trees and shrubbery.

The Maracaibo project is said to be the first complete project of its kind for laborers, and is one of three recent developments in Venezuela. These include the El Silencio slum-clearance project in Caracas, which now offers 800 apartments renting from $36 to $60; and the Urbanizacion Artigas—210 one-family houses, renting from $50 to $70 per month as accommodations for middle-class workers.



***Housing for Venezuela**—Soon to be ready for 1,000 workers and their families at Maracaibo in the "Urbanizacion Urdaneta", a group of whose concrete structures are shown below a single-unit floor-plan. Despite appearance, buildings are one-story, with upper "windows" of grillwork providing additional ventilation; this feature is found especially desirable in a warm, humid climate of the port city.*

Power . . . .

Sweden—The Swedish government has issued an invitation to experts on dam construction and hydro-electric power production to attend an international congress at Stockholm in June of 1948.

The invitation was issued at a recent Paris meeting of engineers representing international and national engineering societies of most of the world (*ENR* Oct. 3, 1946, vol.p.420).

Swedish engineers said that their country will have "much of interest" to show the assembled construction men, since the nation completed several large projects during the war, and has several others under way. Among the projects now under construction is the Harspranget plant, situated above the Arctic Circle. It will produce some 255,000 kw. and will be the country's biggest power station. This project includes a 2,000-ft. long concrete dam on the Lule River high up in the mountains of Lapland that will back up a lake that will have a storage capacity of 113,000,000 cu.ft.

Australia—In an effort to bolster Australian plans to attract new settlers and new industrial capital, the Electricity Commission of the State of Victoria recently outlined a 10-year program to expand the state's overall electric generating capacity from 409,715 kw. to 717,715 kw.

Principal extensions to meet the state's growing power needs will take the shape of new plants that will make the 175,000 kw. Yallourn thermal station a 300,000 kw. installation—largest in Australia. Bids are asked for two 50,000 kw. generators for this plant.

All the boilers at Yallourn operate on brown coal of 65 percent moisture that is mined nearby at the rate of some 20,000 tons per day. The fuel, as it comes from the open-cut mines, has a very low calorific value, and the installation will include pre-drying devices and other treatment processes necessary to make the fuel usable.

The balance of the newly-developed power will come from hydro schemes, including the partially-completed Kiewa Project near Towanga, and a projected development at Hume Weir in New South Wales.

Experts . . . .

Japan—To expedite early action on Japanese reparations, five American civil and industrial engineers, serving as consultants to the War Department, are now at work on a 30-day survey of appraisal and evaluation of industrial plants and equipment to be made available as reparations for war damages.

The group is headed by Clifford S. Strike, president of the F. H. McGraw Co. of Hartford, Conn., who formerly served as chief of the building materials and housing branch of the economic division of the United States Group Control Council for Germany. Other members are: Paul B. Coffman, president of Standard Research Consultants of New York City; F. C. MacKrell, Washington representative of Stone and Webster, Inc., and George F. T. Burgess, of Coverdale and Colpitts, New York City.

***Welded Steel Bridge**—Spanning the broad Hawkesbury River in New South Wales, Australia, this new steel bridge was recently completed by the Clyde Engineering Co., Ltd., of Sydney. About 2,000 ft. in length, the bridge was fabricated in sections at the company's plant and transported to the site by road—the largest section being 82 ft. in length and weighing 24 tons. Each of the spans is 440 ft. long, and was fabricated by substituting welding for riveting of all members. Australian engineers said the spans are the largest ever to be fabricated by welding.*

Planning . . . .

England—A bill seeking to amend and clarify England's present Town and Country Planning Bill by liberalizing definitions in the original act and making other changes, recently was introduced for consideration by the House of Commons.

The measure sets up a new planning system to make practical the reconstruction and redevelopment of old towns (under the present law "new towns" must be built); preservation of "green belts" in industrial areas; controlling allocation of land for new housing and industrial development, and the provision of adequate open spaces for recreation in overcrowded areas.

Such work has been well-nigh impossible heretofore, proponents said, because of the "inflated" prices payable to landowners by local authorities, and what was called the "excessively static and rigid" planning system that placed undue emphasis on local planning at the expense of regional and national needs.

Payments found difficult

In the past, local authorities have—at least in theory—been able to preserve such land as that in London's "green belt" against uncontrolled building, but found themselves unable in actuality to pay the excessive compensations involved. Under terms of the new bill, the land is not nationalized, but landowners are deprived of the right to build on their land unless the proposed building is in accordance with proper planning requirements. The bill distinguishes two elements in the value of land—its value for the purpose to which it is at present being put (shops, factories, housing, etc.) and its value for potentially more valuable uses.

Under the new planning procedure set forth, within three years local authorities would have to submit their proposals for review and coordination with other plans and the national interest; and governmental subdivisions larger than municipalities will be able to join in efforts to plan for future development.

In addition, the bill provides full powers for public purchase of needed lands, through a treasury grant to local authorities.

Additional sections of the bill grant full powers to planning groups to control outdoor advertising.

ENR editor established in Cleveland office

In a move to strengthen its regional coverage of construction in the active central area of the country between the Alleghenies and the Rockies, *Engineering News-Record* is establishing an associate editor, J. Roland Carr, in the McGraw-Hill regional office in Cleveland, Ohio. Mr. Carr will move his headquarters from Chicago, where he has been teamed with Associate Editor Vincent B. Smith in covering the Middle West territory for the paper.

J. R. Carr

The new Cleveland territory will comprise the Ohio River and Lower Mississippi River valleys and will include the states of Michigan, Indiana, Ohio, West Virginia, Kentucky, Tennessee, Arkansas, Louisiana, Mississippi and Alabama. It will also extend eastward into Pennsylvania to include Pittsburgh and the Allegheny and Monongahela River valleys.

Mr. Carr, a graduate in civil engineering of the University of Kansas in 1925, joined the editorial staff of *Engineering News-Record* in March, 1943. Immediately following graduation from college he entered upon a 3-year job in the bridge design office of the Kentucky state highway department, which he left in 1928 to go with the American Bridge Co. at Gary, Ind. Two years there were antecedents to eleven years in the bridge division of the Wyoming state highway department. In 1942 he returned to the American Bridge Co. to help on its war contracts.

In his new territory, Mr. Carr will also represent *News-Record's* sister publication, *Construction Methods*.

Emergency bonus for N. C. state employees

The North Carolina legislature has approved an emergency bonus payable to highway and all other state employees on their salaries for the remainder of the current fiscal year. The action is in addition to any permanent steps that might be taken by the legislature regarding salaries for the biennium beginning July 1. The bonus ranges from $144 for persons making $1,200 and less per year to $270 for persons earning from $2,701 to $6,600 per year.

Massachusetts appoints new works commissioner

William H. Buracker, of Winchester, has been named Massachusetts Commissioner of Public Works for a 3-year term, by Gov. Robert M. Bradford. He succeeds Commissioner Joseph F. Cairnes, of Cambridge, who was appointed by former Gov. Maurice J. Tobin following the removal of Commissioner Herman A. MacDonald.

Captain Buracker, who has been in charge of the naval schools at the Massachusetts Institute of Technology, is a veteran of the Pacific theater, and holds several decorations for his war work in the Navy.

In a shift of officials in control of the state's housing effort, Lewis H. Weinstein, former chairman of the Emergency Housing Commission, becomes chairman of the State Board of Housing. He succeeds Philip H. Nichols, resigned. Albert H. Bigelow was named chairman of the Emergency Housing Commission.

Cash, books wanted for war-damaged libraries

An appeal to American engineers to contribute to the drive to help restore war-damaged or destroyed technical libraries in Europe, Asia and the Philippines has been issued by the Committee on International Relations of the Engineers Joint Council. Both money for the purchase of new books, and selected used technical books and periodicals are needed.

Checks should be sent to Joseph Pope, Chairman of the Book Commission, Engineers Joint Council, 29 West 39th Street, New York 18, N. Y. This fund is used to fill specified needs of the damaged libraries. Offers of books, containing lists by author and title, should also be sent there. The books themselves should not be shipped until full instructions are received. The shipments overseas are made through the American Book Center for War Devastated Libraries, Inc., Washington, D. C., through a cooperative arrangement with the engineers.

Donors of books will be furnished with bookplates with space to enter their names. This original bookplate bears the insignia of the five national societies of the Engineers Joint Council. They are: ASCE, AIMME, ASME, AIEE, and AICE. Acknowledgment cards also are included.

Since the campaign was started about a year ago, Mr. Pope said, some 20,000 items have been accepted and instructions given for mailing.

D. A. Keys named to Canadian research body

David A. Keyes, professor of physics at McGill University, Montreal, has been appointed vice-president of the National Research Council of Canada, and resident director in general charge of Canada's atomic energy plant at Chalk River, Ont.

A graduate of the University of Toronto, with post-graduate experience at Harvard and Cambridge universities, Dr. Keys has been a member of the National Research Council for the last year. He will be assisted at Chalk River by K. F. Tupper, director of engineering, and W. B. Lewis, director of research.

Contractors, utilities certified for surplus

A new procedure under which public utilities and building contractors may certify themselves for priorities to buy certain types of surplus property was announced last week by Housing Expediter Frank R. Creedon.

The new priority regulation (HEPR 7) gives such bidders a limited priority status—just ahead of the general public—in sales of surplus at government installations. Requested at the recent conference of utility and federal disposal agency representatives in Washington, the new order modifies previous regulations.

As provided by the previous orders, qualified utilities and building contractors receive priority ratings after government agencies, Reconstruction Finance Corp., state and local governments and non-profit organizations.

Qualifications for the new priority are less stringent than the old requirement that all surplus obtained had to be put directly into a veterans housing project. The new regulation qualifies any utility which will use the desired surplus for "Construction or maintenance of utilities . . . . necessary to service" veterans housing or to replace "equivalent materials" used for housing.

Surplus purchasers may qualify as "self-certifiers" by submitting with their bids a written certificate, which must be "substantially" as follows:

"The undersigned certifies to the U. S. government, subject to the criminal penalties of Section 35 (A) of the U. S. criminal code, that (1) he is eligible under HEPR-7 to purchase the structures and utilities (or materials) covered by this bid, and (2) he will use or sell the materials derived from the structures and utilities in accordance with that regulation."

Labor blamed in Jersey building delay

Pointing up the need for machinery to settle jurisdictional disputes between labor unions, as well as arbitration procedure between labor and employers, builders in the New York City metropolitan area said last week that inter-union squabbles were delaying plant construction in at least four industries in the north New Jersey area.

According to an interview with architects and industrial executives published in the New York *Times*, the work being delayed by "apparent unwillingness" to settle jurisdictional disputes totals more than $25,000,000 in northern New Jersey alone.

Management executives told the newspaper that they were "prepared for a period of harmony" in view of the announcement of a new arbitration pact between the AFL Building and Construction Trades Department and the Associated General Contractors (*ENR* Feb. 6, vol.p.181). "So far," the men said, "there has appeared to be little willingness to settle jurisdictional disputes." The AFL-AGC agreement did not concern itself with inter-union matters.

New Jersey jobs being held up at present, according to the *Times*, include: Work for the New Jersey Bell Telephone Co. at Plainfield; a plant for the Merck Chemical Co. at Rahway; a plant for the Colgate-Palmolive Peet Co. at Jersey City; construction of the Bell Telephone Co. laboratory at Murray Hill, and the Standard Oil Co.'s laboratory at Linden.

Strike threat in New York

On the heels of the announcement of general agreement between contractors and AFL building unions, and of a recent pact between New York City unions and builders (*ENR* Jan. 16, vol. p. 89), Local 46 of the Metallic Lathers (AFL) threatened to call a strike for Feb. 17.

The lathers voted to strike unless the Building Trades Employers Association meets their demand for a $2.50 per hour rate, on a five-day week and a seven-hour day. Employers rejected the demand, insisting that the lathers must abide by the master agreement, which provides for an eight-hour day.

Many labor bills in Texas

While the industry in general awaited practical application of the new AFL-AGC disputes agreement, state legislators were reported filling legislative hoppers with new measures designed to curb labor.

In Texas, among numerous bills already introduced were measures forbidding the closed shop, prohibiting mass picketing, requiring unions to assume financial responsibility for damage caused by members during strikes or violence, forbidding strikes against public utilities if the public welfare is affected adversely, and a measure to halt portal-to-portal suits by limiting to six months the time in which a suit may be filed for back pay.

Other developments

On another front, the Allied Construction Industries of Delaware announced it had completed a contract between union stonemasons and employing contractors that grants the masons a wage increase of 22½ cents per hour, to bring the rate to $2.05 per hour.

In New Jersey, a 3-day strike of 1,500 Middlesex County (New Brunswick) carpenters ended Feb. 10 when the men voted to renew their last year's contract with a change in the hourly rate from $1.75 to $2.10. The carpenters had asked $2.25 per hour.

Big utility programs planned in three states

Utility companies in Maryland, Connecticut and Massachusetts last week announced expansion programs totalling more than $57,000,000 for construction.

The Consolidated Gas and Electric Co. of Baltimore, Md., proposes to spend $45,000,000 to $50,000,000 by 1949 for construction and equipment.

One of the chief projects is a 60,000-kw. generating unit being built at the Riverside power plant.

Connecticut Power Co. expansion plans will include a power generating plant at Stamford to cost $6,000,000. Stone & Webster Engineering Corp., Boston, Mass., has charge of construction plans. General Electric Co., Pittsfield, Mass., will build the generator and Babcock & Wilcox the required high pressure steam boiler.

Construction of a $6,000,000 steam generating plant for the Western Massachusetts Electric Co., will begin in the spring. The plans call for a 40,000 kw. capacity, serving communities in western Massachusetts. The plant will be located on the Connecticut River in West Springfield, Mass.

Wagner changes define "professional"

Provisions designed to improve the position of professional men under the National Labor Relations Act were included in two bills introduced in Congress last week.

One bill (S. 360) was introduced in the Senate by Senator Joseph H. Ball, and the other (H.R. 1754) was started through the House by Congressman Carl Hinshaw, a civil engineer.

Each bill adds definitions of the term "professional employee", which are substantially identical. The following is quoted from the Ball Bill.

"The term 'professional employee' means—

"(A) any employee engaged in work (i) predominantly intellectual and varied in character as opposed to routine mental, manual, mechanical, of physical work; (ii) involving the consistent exercise of discretion and judgment in its performance; (iii) of such a character that the output produced or the result accomplished cannot be standardized in relation to a given period of time; (iv) requiring knowledge of an advanced type in a field of science or learning customarily acquired by a prolonged course of specialized intellectual instruction and study, as distinguished from a general academic education or from an apprenticeship or from training in the performance of routine mental, manual, or physical processes; and (v) of a character which, under state or local law, would generally require licensing, certification, or registration of the practitioner, if he made such services available to the public; or

"(B) any employee, who (i) has completed the courses of specialized intellectual instruction and study described in clause (iv) of paragraph (A), and (ii) is performing related work under the supervision of a professional person to qualify himself to become a professional employee as defined in paragraph (A)."

Both bills also provide that the National Labor Relations Board, when making determinations of appropriate bargaining units, shall not group professional employees with employees who do not fall into that class.

Approved by societies

In principle, the objective of both these bills as they relate to professional men were approved by the Engineers Joint Counsel before the bills were drafted. Drafts of the sections relating to professional men were approved by the Board of Direction of the American Society of Civil Engineers at its meeting in January.

HIGHLIGHTS OF MUNICIPAL DEVELOPMENTS

A summary of current activities in city engineering and construction

New York to build $17.5 million bus terminal—Toledo prohibits sandstone sidewalks—Los Angeles seeks approval of $40 million improvement bonds—Seattle airport bond issue held up by courts —Cities adopt new plan for raising pay

In its first move—from a construction standpoint—to make a real solution of the city's growing downtown traffic congestion, the New York City Board of Estimate has approved construction of a $17,500,000 union bus terminal.

The new terminal will be built and operated by the Port of New York Authority—an interstate body representing New York and New Jersey—and its construction will eliminate eight smaller terminals that now dot the heavy-traffic midtown area of Manhattan Island. Elimination of the lumbering inter-city buses from midtown traffic lanes was one of the first recommendations of recent planning committee reports to Mayor William O'Dwyer.

An entire city block (see accompanying map) will be occupied by the new structure, which will be connected by direct ramps to the Lincoln Tunnel under the Hudson River. A majority of the buses serving commuters from New Jersey points use this tunnel.

Promising an immediate start on clearing the tenements and warehouses now occupying the site, Port Authority officials said the new building will have a floor area of about 800 by 200 ft., probably on two floors, and will contain space for ticket offices, waiting rooms, restaurants and shops, and offices, in addition to bus loading areas.

Airport bonds stopped

The Port of Seattle has been enjoined by Superior Judge Robert M. Jones from issuing $3,000,000 in bonds to finance development of the Seattle-Tacoma Airport, operated by the port.

Voters on Nov. 5 favored the bonds, 88,732 to 44,293, but the total vote fell short of the required 50 percent of the total vote cast at the last general election. The port commissioners took the position, however, that it was the intent of the state law to consider only the toal vote on port district issues, not all the persons who voted for President and other candidates. The court decided against the authority's interpretation.

Construction work at the airport is not expected to be affected by the court decision, as the port has $2,500,000 available in cash for the work.

Sandstone sidewalks out

The Toledo, Ohio, City Council has approved an ordinance prohibiting the use of sandstone for sidewalks over vaults, and requiring that existing sandstone covers be reinforced with metal supports.

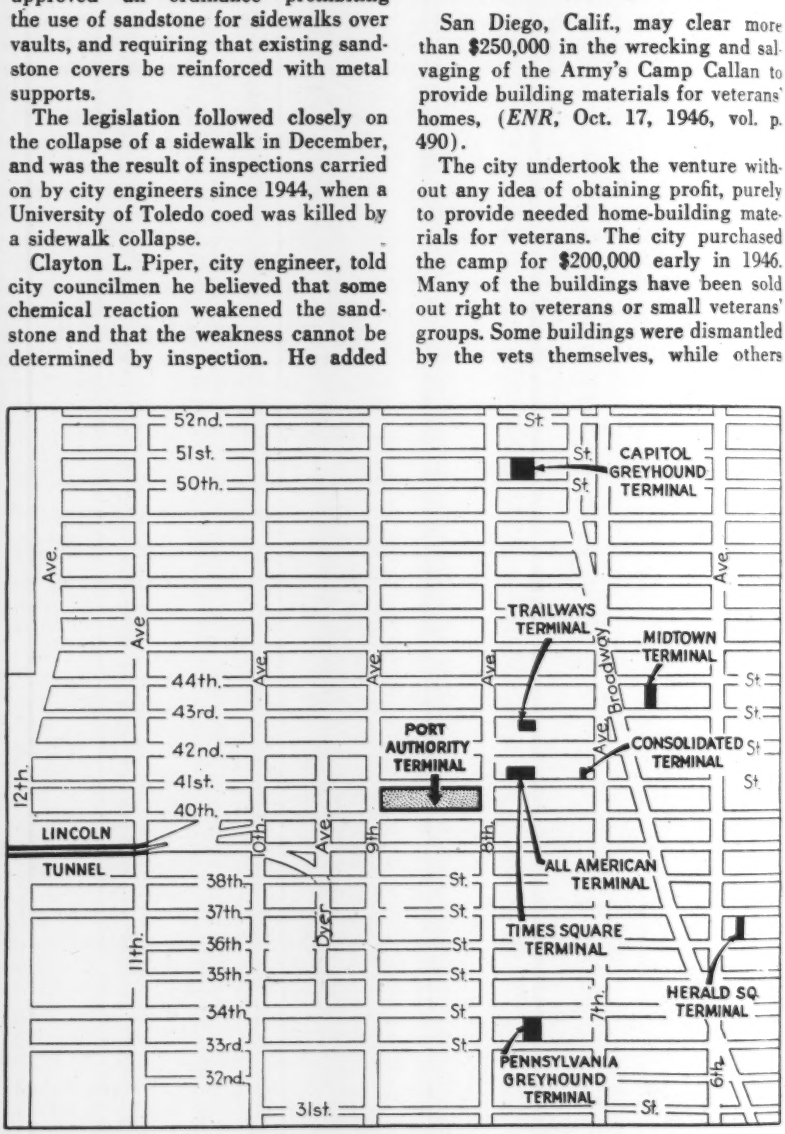
The legislation followed closely on the collapse of a sidewalk in December, and was the result of inspections carried on by city engineers since 1944, when a University of Toledo coed was killed by a sidewalk collapse.

Clayton L. Piper, city engineer, told city councilmen he believed that some chemical reaction weakened the sandstone and that the weakness cannot be determined by inspection. He added that tests in the Toledo Testing Laboratory on sandstone revealed it was dangerous in several ways: it snaps easily under sharp impact, and, in cases where it does not crack immediately it sometimes gives way later under pressure loads. Commenting on the new ordinance, Mr. Piper said that supported sandstone walks will be permitted only until concrete walks can be placed.

Profits on Army Camp

San Diego, Calif., may clear more than $250,000 in the wrecking and salvaging of the Army's Camp Callan to provide building materials for veterans' homes, (*ENR*, Oct. 17, 1946, vol. p. 490).

The city undertook the venture without any idea of obtaining profit, purely to provide needed home-building materials for veterans. The city purchased the camp for $200,000 early in 1946. Many of the buildings have been sold out right to veterans or small veterans' groups. Some buildings were dismantled by the vets themselves, while others



New Terminal—A block-square interurban bus terminal to be built by the Port of New York Authority will consolidate eight existing stations.

were hauled bodily from the site to distances as far as 60 miles away. Approximately 15,000,000 bd. ft. of loose lumber was salvaged. The city estimates that 500 camp buildings have provided 1,500 dwellings.

Parking lots urged

The Minneapolis, Minn., city council last week was considering plans submitted by its police and street traffic committee, urging construction of 20 double-deck public parking garages, to be located in a rough circle near the city's business center.

Committeemen suggested that the double-deck structures could accommodate more than 30,000 vehicles daily, or that single-deck structures, to handle more than 8,000 cars daily, could be built. Cost of the single-deck garages was estimated at $5,350,000, including land costs.

Los Angeles seeks funds

Bond issues for civic improvements totalling an estimated $40,000,000 have been proposed to the Los Angeles city council for placement on the spring election schedule. Mayor Fletcher Bowron said the money would be apportioned as follows: $10,000,000 for interceptor sewers; $13,000,000 for increased playground and recreational facilities, and other money for a new public health building and a police administration building.

Boston airport costs up

Construction costs for the new terminal building at Logan International Airport, Boston, Mass., have jumped from $10,500,000 to $15,000,000 since the estimates were made a year ago, the Massachusetts Legislative Committee on Aeronautics was told last week.

Richard K. Hale, director of the division of waterways of the State Department of Public Works, appeared before the committee to ask for an appropriation of $20,000,000 to complete the airport, citing the rise in costs.

Honolulu water project

In addition to $3,500,000 worth of projects now under way, Honolulu, Hawaii, plans to spend $2,500,000 improving its war-strained water system in the next two years. Honolulu now draws 65,000,000 gpd. from its main underground water body, compared to 30,000,000 gallons in 1937.

Completion of a $600,000 plant outside the city at Halawa during the war years has provided a source of 20,000,000 gpd. and made water sources ample for the time being.

Current expansion is devoted to installation of lines, reservoirs and pumping stations for distribution of the Halawa water to the city and for expansion into growing city areas. Of the $3,500,000 now being spent, FWA is contributing $1,325,000.

To meet the expansion needs and rising costs, water rates and charges were increased approximately 33 percent Jan. 1 the first increase in 14 years.

Philadelphia plans subway

The first step toward construction of a $25,000,000 Broad Street subway extension for Philadelphia, Pa., was taken last week when an ordinance was introduced providing financing for necessary surveys. A second ordinance, to authorize extension of the line from its present terminus at Broad St. and Olney Ave., to Pennypack Circle in the extreme northeast section of the city, is scheduled for introduction shortly.

Building code set aside

The Massachusetts Emergency Housing Commission recently set aside the usually inviolable provisions of a town's building code to authorize construction of a prefabricated house.

The case arose in the town of Natick, where a prefabricated house was under construction by the Solaray Corporation, distributors of prefabricated plywood houses. The town's building inspector stopped work when he found that 2x3 in. studding was being used instead of the 2x4 in. wood required by law, and that the roof rafters were slightly undersize.

SMOKE TROUBLES

The City of Pittsburgh, Pa., prepared last week to obey its own anti-smoke ordinance, when it authorized expenditures for purchase of low-volatile coal and smoke elimination equipment for all city buildings. Structures affected include 61 fire stations, nine police stations and 18 other buildings.

While Pittsburgh sought to clear its traditionally smoky atmosphere, the New York City Department of Health announced the setting up of a special unit to measure pollution of the air from smoke. First results, according to Dr. Israel Weinstein, commissioner, indicated the "soot load" of the air amounts to 112 tons to the square mile each month.

Municipal pay boosts based on price indices

Eleven cities are basing pay raises for municipal employees on the U. S. Bureau of Labor Statistics consumers' price index or similar cost-of-living yardsticks according to the International City Managers' Association.

Under this type of pay-adjustment plan, designed to accommodate municipal salaries periodically to price fluctuations, several cities granted pay raises effective this month. Portland, Ore., granted a 1947 pay boost of $15 a month based on increases in the consumer's price index; a $25 monthly raise was granted last July on the same basis. All Portland employees have been given pay raises totaling at least $57 a month since the plan was first adopted back in 1942.

Duluth, Minn., is now paying a $35 monthly cost-of-living bonus to municipal workers based on a similar plan, $15 a month more than was paid during 1946. Phoenix, Ariz., recently granted a $20 monthly raise to all salaried workers based on a 15-point increase in the consumer's index since June 15. Hourly employees, as in most other cities where the plan operates, were given equivalent pay increases.

Calls for percentage rise

Such pay-adjustment plans call for percentage changes of a base salary in direct proportion to percentage changes in the consumer's price index, published each month by the labor statistics bureau. Most of the eleven cities limit pay adjustments to one a year and apply the percentage change only to the first $1,200 to $1,620 of the annual salary.

Brookline, Mass., and Sherwood, Wis., however, adjust employees' salaries every month. Brookline computes its bonus on the index of the Massachusetts labor and industry department.

In Milwaukee, pay boosts based on price-index increases have amounted to $64.52 per month since the plan was adopted in 1943. For hourly workers, the equivalent pay increase has been 38.7 cents an hour. In making adjustments, Milwaukee multiplies the base salary of $1,620 by an annual index change, resulting in a flat dollar increase for all employees rather than a percentage adjustment.

Other cities using this plan include Colorado Springs, Colo.; St. Paul, Minn.; Jackson, Mich.; and Whitefish Bay, Wis. but Columbus, Ohio, and San Diego Calif. discontinued their pay-adjustment plans during the war.

St. Paul, in 1922, was the first city to adopt such a cost-of-living pay increase plan.

Santee-Cooper to sue on rip-rap contract

Power authority to ask $390,000 on charge contractor failed to reinforce slopes of Santee basin

The Santee-Cooper Authority, of Charleston, South Carolina, will file suit for about $390,000 as a result of the failure of the Wright Construction Co., of Columbus, Ga., to fulfill its $3,822,800 contract to reinforce with rip-rap the slopes of the Santee basin, it was disclosed Jan. 28 by R. M. Jefferies, general manager of the authority. The suit actually will be against the New York Casualty Co., which bonded the Columbus organization's bid.

Mr. Jefferies said the authority had accepted the Wright bid "in good faith," and that later the company "took the position they couldn't haul rock down the Congaree River and failed to live up to the contract."

The Wright Construction Co.'s figure of $3,822,800 for the job is $1,107,550 lower than that of the firm which now has the contract for the work—the Grannis, Thompson and Street Co., of Charlotte, N. C. The latter concern's bid was $4,930,350.

Mr. Jefferies said the slopes of the basin now are protected by a layer of porous concrete which has proved inadequate. He added that $25,000 is spent annually on slope protection. The present plan is to break up the concrete covering and then augment it with large boulders to prevent further damage.

For some time, officials of the authority reportedly have been concerned with another problem on the banks of the basin. Erosion has taken considerable effect on the reverse (land) side of the slopes. Huge gulleys, some more than 6 ft. deep, are evident. Recently lespedeza bicolor—a plant ordinarily used for bird food in hunting preserves—has been planted as an experiment. One plot has shown satisfactory results, giving rise to the hope that the plant's long, sturdy roots of the bicolor will hold the earth.

Fisheries body opposes additional power dams

Construction of more power and reclamation dams on the Columbia River is opposed by the Oregon legislative fisheries commission until present dams have been utilized to their full capacity.

The commission contends that no dam can be built without hurting fisheries, declaring that even Bonneville Dam, with the finest system known for raising fish over the dam by use of ladders and elevators, has caused great fish loss. The commission opposed McNary Dam, asserting it would cause even more loss than Bonneville.

"Talk of an imminent power shortage unless more dams are built seems to the fisheries people to be in the nature of propaganda," the committee said, pointing out that 12 more generators can be installed at Grand Coulee Dam and six more at Rock Island Dam.

A new flood control plan to be asked by Indiana

Millions of dollars will be asked of Congress immediately for completion of an 8-point flood control program for Indiana. The request will come as the result of a 5-hour conference Jan. 23, between Gov. Ralph F. Gates, Lt.-Gen. R. A. Wheeler, chief of Army Engineers, and other state and army officials on an Ohio River cruise looking over proposed flood wall sites along that river.

The program as developed, includes:

New Albany—River-front wall similar to the one constructed at Jeffersonville. Public hearing will be held.

Jeffersonville—Ten pumping units to complete extensive flood protection works. Bids will be asked by the army within 60 days.

Cannelton—Green Construction Co., Oakton, Ind., low bidder at $308,500 to build first 30 percent of levees and flood wall. Work to start in February.

SANDHOGS — NOT SANDBAGS

William Denny, project manager for Merritt, Chapman-Scott Corp., on construction of the piers for the Mississippi River Bridge at Memphis, insists he did not use "sandbags" to sink the caisson for the final pier on the Memphis Bridge project, as reported in ENR Jan. 30, vol. p. 174. The word should have been "sandhog". In fact, the entire offending paragraph was to have been omitted, but the printer chose instead to delete a paragraph that read:

"Commissioner C. W. Phillips of the Tennessee State Highway Department, has revealed that increases in cost of labor and material on the new bridge have amounted to $2,400,000. This raises the original estimate of $8,233,320 for rights of way, and building the bridge and approaches to $10,600,000."

A comprehensive article describing the construction of the piers for the bridge at Memphis is scheduled to appear in an early issue.

Slum clearance laws urged to aid Ohio cities

The Urban Development Commission, created recently by the Ohio legislature, has filed a 60-page report urging the passage of laws to permit cities to eliminate their slum areas and to buy land to provide parking facilities. Additionally the report includes suggested amendments to the state housing law giving veterans' families preference in rental of public housing facilities.

Under the proposed measures, municipalities would have power to acquire and dispose of real property to get rid of slum areas, through condemnation proceedings, and then turn the land over to private capital for development as living quarters or for other purposes provided in its development plan.

Another proposed law would empower cities to condemn land for use as off-street parking areas and to operate the lots or turn them over to private agencies. The law would permit cities to use tax money to pay for the lots or to issue general or revenue bonds or to levy special assessments to get the necessary fund.

Oregon OK's Toketee power development

The Oregon Hydro Electric Commission has issued a license to the California-Oregon Power Co. of Medford authorizing development of the company's $4,000,000 Toketee Falls power project on the North Umpqua River, about 50 miles east of Roseburg. The Federal Power Commission previously had approved the project.

The power company hopes to get construction started by March 1, according to John C. Boyle, general manager. Bids will be called soon for construction of a 5,600-ft. concrete-lined tunnel at Toketee Falls, originally estimated to cost $800,000. Next on the construction schedule is an earth-fill diversion dam, 36 ft. high with a crest length of 350 ft., and a concrete-lined spillway, costing an estimated $300,000. Water will be carried from the diversion dam to the power plant through 880 ft. of wood stave pipe, the tunnel and an additional 1,500 ft. of steel pipe.

The third step of the project calls for a concrete and steel reinforced power house, providing cover for two vertical reaction turbines which will operate under an effective head of 405 ft. These turbines will be directly connected to two alternating current generators each unit of which is rated at 12,500 kilowatts output.

Want more federal funds for rural N. Y. roads

New York State is preparing to carry to Washington its fight for greater federal allocations for rural highway construction.

Describing present federal allocations for use on the federal-aid secondary highways of New York State as "inadequate", State Superintendent of Public Works Charles H. Sells has told members of the New York State County Highway Superintendents' Association that his department is now completing studies which will be presented to federal officials in an effort to obtain a more equitable allotment of federal money for such work.

Mr. Sells pledged to the county highway superintendents the continued cooperation of the state in all phases of their work. Development of the rural highways under their jurisdiction, he said, should be coordinated closely with that of the primary state system. A more adequate federal allocation, he emphasized, would provide additional county relief and result in lasting benefits through construction of more and better rural highways in every county of the state.

Va. spends $19 million on secondary roads

A report from the Virginia Highway Department discloses that expenditures on the secondary road system set a new record of $19,281,500 in the year 1946. This emphasis will be continued until school bus routes and mail routes are made all-weather highways, the department said.

Last year the department, in an effort to catch up on repairs and maintenance postponed during the war, as well as to complete new construction, improved more miles on the secondary road system than in any previous two years, despite shortages of skilled labor, materials and replacements for equipment.

Of the mileage stabilized by improvements last year, school bus routes accounted for 11,519 miles. The department strengthened 8,000 miles of lightly surfaced roads at a cost of $8,000,000; retreated 1,900 miles of bituminous-treated roads at a cost of $2,280,000; repaired 1,244 bridges, totaling 45,649 lineal feet, at a cost of $496,500; graded and lightly surfaced 2,740 miles of unimproved roads for $4,110,000, and applied new bituminous oil treatments on 697.5 miles of highway at a cost of $1,395,000. Smaller items made up rest of the expenditure.

Plan $6.5 million roads for Baton Rouge section

The approval of a highway improvement plan for a 7-parish area including East and West Baton Rouge, Pointe Coupee, East and West Feliciana, Ascension and Iberville, was announced at Baton Rouge, La., Jan. 22, by Highway Director P. A. Frye.

The total estimated cost of $6,684,214 does not include the cost of routine maintenance work performed by the highway department's own forces, the director explained.

In addition to the programmed construction for this year, the director's records show that in 1946, the projects completed or continuing into this year amounted to $988,069.65.

Charter sought for R. R. to Northeast Quebec

Application has been made to the Canadian Parliament for a charter to permit the construction of a railway line to run north into the huge, relatively unexplored Ungava region of north-eastern Quebec, as a part of the development work resulting from the discovery of iron ore in that region recently.

The charter is sought in the name of Quebec North Shore and Labrador Railway Co., a subsidiary of the Hollinger North Shore Exploration Co. Limited, in turn a subsidiary of the Hollinger Gold Mines Co. Limited, one of the great gold producers.

The railway will start at a point on the St. Lawrence River between Riviere Marguerite and Riviere Moisie, on the isolated north shore of the Gulf of St. Lawrence. It will run north up the valleys of the Moisie and Wacouno Rivers, then through the eastern part of Labrador to Ruth Lake, and finally to a suitable location for a port on Ungava Bay.

The charter application seeks powers for the construction of docks and terminals and other necessary services in connection with the opening up of the territory. It has been said that $125,000,000 eventually will be spent on this development which started in 1946 with a special exploration grant to the company by the Quebec legislature.

New road construction urged by Texas governor

Governor Beauford H. Jester of Texas in a recent annual message urged that surplus money in the state's fund for redeeming bonds on highways taken over from local governments be dedicated entirely to new road-building. It now is distributed equally to the counties and the state highway department, without restrictions upon its use.

Jester declared also that counties and districts should be permitted to pool their funds with the state highway department for highway work.

Photo by British Combine

***Genissiat Dam Takes Shape**—French engineers and construction workers are taking advantage of every opportunity to push construction of Genissiat Dam, high up in the Rhone River Valley below the town of Bellegarde. The dam will be of concrete-gravity section, 340 ft. high and 650 ft. across the crest; and the project will include a powerhouse and ship canal (ENR Sept. 26, 1946, vol. p. 403). Six 19-ft. dia. penstocks lead through the structure to an initial installation of four 70,000 kva. generating units. Production of the plant will equal 10 percent of France's present hydro-power units.*

MEN AND JOBS

Luis G. Morphy, district engineer in charge of all engineering work in the New England area for the Boston & Albany Railroad of the New York Central System, retired Dec. 25. A native of Mexico, Mr. Morphy was educated at Spring Hill College, Ala., and Rensselaer Polytechnic Institute, Troy, N. Y. He joined the engineering department of the New York Central System as a rodman in 1900. He served through various grades in the engineering department for 45 years.

W. G. Sloan, Billings, Mont., has been appointed by the United States Department of the Interior a representative on the Interior Department's Missouri River Agency Commission. For three years, Mr. Sloan was assistant regional director for the Bureau of Reclamation at Billings. He was also a leading figure in the Missouri River Valley development plan. He will serve on the commission with representatives of the Interior, War and Commerce departments and the Federal Power Commission.

Col. J. P. Carriere, city engineer of Hull, Ont., has been awarded the Legion of Honour and Croix de Guerre by the Republic of France for services on behalf of France and the Allied cause during the World War.

Col. Henry Hutchings, Jr., chief of the U. S. Army Engineers' Dallas, Tex., division office, has been presented with an Oak Leaf Cluster for his district engineer work in Louisville, Ky., in 1941 and 1942, and with a Distinguished Service Medal for his engineer work supporting the U. S. Army on Morotai, Luzon, and in Japan in 1944 and 1945. Colonel Hutchings was commanding general of the Fourth Engineer Special Brigade.

Kenneth F. Vernon, formerly chief of the progress control division of the Bureau of Reclamation, is now assistant director of Region 6, at Billings, Mont. A civil engineer, Mr. Vernon has been associated with the bureau since 1934, specializing in irrigation canal and structure design and construction.

John W. Alden, of Wilmington, Del., has been named to succeed John I. Cahalan as New Castle County Engineer. Others named in the county engineer's office include: **Herman Warfel,** assistant to the county engineer; **John Taylor,** chief assistant county engineer; **Harold McFarlan** and **Arthur Hauber,** assistant county engineers.

The following changes have been made in the Nebraska Engineering Department by State Engineer Wardner G. Scott: **R. C. Ayres,** resident engineer at Broken Bow, has been made Norfolk district engineer. **L. N. Ress** became assistant engineer of design in the Lincoln office. He formerly was district engineer at Norfolk. Project engineer **Oliver Johnson** has become resident engineer at Broken Bow. **Maj. Ralph Wells** has returned to the department, and he has taken over Mr. Johnson's work at Mullen. **Maj. R. F. Weller,** former assistant construction engineer in the Lincoln office, will take over the duties of **W. B. Boucher,** who resigned to become chief of the engineering section of the Civil Aeronautics Administration regional office in Kansas City.

W. Chester Morse has been reappointed superintendent of the Seattle, Wash., City Water Department. He has held the post more than eight years, having first been appointed in 1938 and reappointed three times since, and has been chairman of the Board of Public Works for the last six years. He also has served the city as superintendent of lighting and as city engineer.

A. H. Parker of Cornwall, Ont., has been appointed by the Dominion Ministry of Transport as superintending engineer of the Ontario-St. Lawrence canal system, replacing **L. D. Hara,** retired.

Guy M. Fairfield is with the Illinois Postwar Planning Commission, Springfield, as examining engineer.

Guy H. Elbin, Worthington, Ohio, chief bridge engineer for the Ohio Highway Department, has resigned to become engineer in charge of construction for the Franklin County (Columbus) engineering department.

Robert F. Koerner, Columbus, Ohio, a construction engineer for Franklin County, Ohio, for the last ten years, has resigned to enter private construction business.

John H. Horn, assistant chief engineer of the Salem, Ohio, water works plant for 20 years, has resigned.

Robert R. Ellis, Jr., manager of the Venezuela operations of the Frederick Snare Corp., contracting engineers of New York, has been elected a vice-president of the company. Mr. Ellis has been directing operations for many years in a number of Latin American countries. His headquarters are in Caracas.

Robert F. Werner has been named division engineer for the 8-county area around Columbus, Ohio. A graduate of Ohio State University, he succeeds Grover Snyder. In the Franklin County engineer's office, Mr. Werner had been in charge of highway design and planning. Other division engineers named are: No. 5, Howard Christy; No. 3, C. Homer Bricker; No. 1, O. C. Kohli.

Lawrence Hayes, Belmont, Ohio, has been named Belmont County engineer, a post vacant since the death of G. C. Travis.

W. Allen Stone, graduate in civil engineering, 1929, University of Cincinnati, has been promoted to lieutenant colonel and senior sanitary engineer, U. S. Public Health Service, Chicago, Ill., regional sanitary engineer consultant to National Housing Adminis-

Willis C. Christopher is now assistant supervising engineer of the Columbia Basin Project's irrigation division, with headquarters at Ephrata, Wash. He was formerly a designing engineer for the Southern California Metropolitan Water District, and once served as irrigation consultant to the Mexican government.

tration. With the Sanitary Engineering Corps, as chief engineer and associate chief of party, under the Institute of Inter-American Affairs, Mr. Stone spent two years in South America with headquarters in Lima, Peru, starting as captain, advancing to major in May, 1944. After graduation from the university, Stone was city engineer of Norwood, Ohio, and later, county engineer for Hamilton County, Ohio.

H. B. Jay, who started with the Illinois Division of Highways in 1918, has retired as engineer, day labor construction. After studying engineering at the University of Illinois, Jay worked on irrigation and reclamation projects in Mexico, New Mexico, Arizona, and Southern California.

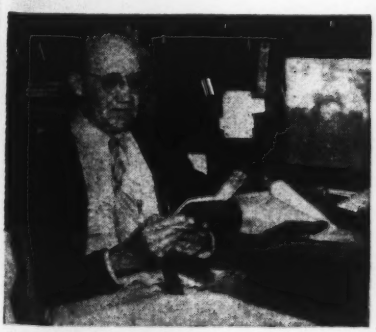
Edison W. Ellis, for the last two years assistant director and chief engineer of the Ohio Highway Department, is now executive vice-president of the Dual Parking Meter Co., Canton.

Ivan J. Troyer, Monroeville, Ind., has been named Allen County highway superintendent, succeeding Edward Nieter, resigned. Mr. Troyer served with the Army Engineers in Alaska, and before that was with the county highway department.

Having served 20 years as deputy county highway engineer of Gallia County, Ohio, **Mrs. Guy White,** Gallipolis, has resigned and is succeeded by **Caroll Swanson.**

Lucien Lupien, civil engineer, is city manager to Louiseville, Que.

Fred E. Swineford has been named engineer-director for Macadam Pavements, Inc., Columbus, Ohio. He has been chief engineer of construction of the Ohio State Highway Department, and was formerly director of public service at Akron.



T. P. Mayes is resident engineer for the South Carolina State Highway Department on construction of a new bridge across the Congaree River on Route 26. Bridge piers—nearly 90 ft. high—will be tallest ever built by the department.

Lt. Col. William J. Ellison is resident engineer at Portland, Ore., for the planned McNary Dam on the Columbia River. The project, designed for flood control and power production, will cost an estimated $90,000,000. Colonel Ellison was graduated in 1935 from the Georgia School of Technology and received a master's degree in civil engineering from the California Institute of Technology in 1937. In 1938 he was commissioned a second lieutenant in the Engineer Corps, helping in the construction of Clark Field in the Philippines. After returning to the United States he again went overseas with the 808th Engineers of which he ultimately took command.

G. Mack Wynn, civil engineer and head of the survey section of the engineering department of Georgia Power Co., has resigned to accept the vice-presidency of the W & A Manufacturing Co., Decatur, Ga. Mr. Wynn joined Georgia Power in 1921 while he was attending Georgia Tech, from which he was graduated in 1925.

James C. Ryan, Youngstown, Ohio, city engineer, has been named temporary head of the building inspection department, pending appointment of a building inspector and zoning engineer, a post left vacant by the resignation of **Paul Boucherle.**

Robert J. Eppley, city manager of Washington Court House, Ohio, has resigned, to accept a similar post in Greendale, Wis.

Cecil R. Leavens, Marion, Ohio, a professional engineer for 33 years, has been appointed purchasing agent of the Ohio State Highway Department. A graduate of Ohio Northern University, Leavens has served as service and safety director of Marion, and was elected three times as Marion County engineer. For the last two years he has been with the War Assets Administration.

Kent Mathewson, recently with the Veterans Administration at Richmond, Va., is to be city manager of Asheboro, N. C., succeeding Walter E. Yow, whose resignation becomes effective March 1. A native of Raleigh, N. C., Mathewson has served as assistant city manager at Durham, N. C., and at San Diego, Calif.

Edward W. Chadeayne has been named engineer of Division 12 of the Ohio State Highway Department, for Cuyahoga, Lake, and Geauga counties, with headquarters in Garfield Heights.

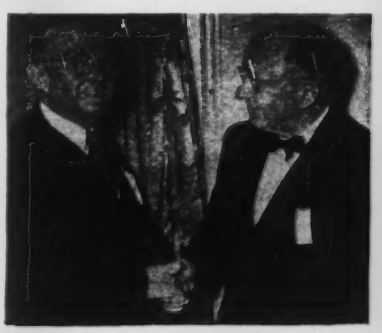
Rolf T. Retz, previously with the Tennessee Valley Authority, Knoxville, Tenn., is now associated with the Virginia Engineering Co., Inc., general contractors, Newport News, Va. During the war, Mr. Retz was with U. S. Engineer Office in Jacksonville, Fla., and with the National Advisory Committee for Aeronautics, at Langley Field, Va.

Elwyn E. Seelye, Albert L. Stevenson and **Burnside R. Value** have formed a partnership, Seelye, Stevenson & Value, consulting engineers, to continue the engineering practice of Elwyn E. Seelye & Co., New York. The practice consists of structural design for buildings and other structures, airports, bridges, manufacturing plants, highways, tunnels and hydroelectric plants.

Mr. Seelye, who has been in active practice of consulting engineering for the last 30 years, is the author of several books on civil engineering and has recently published a Data Book for Civil Engineers—Vol. I, Design; Vol. II, Specifications and Cost; Vol. III, Field Practice. He is a graduate of Cornell University and the original founder of the firm.

Mr. Stevenson has been associated with Mr. Seelye for the last 30 years as supervising engineer in charge of design. He is also a Cornell graduate.

Mr. Value, who has been associated with the firm for the last five years, has a background in heavy enginering work, having occupied, among other positions, that of executive engineer on the Detroit-Canada vehicular tunnel, and assistant chief engineer and director of transportation of the New York World's Fair. During World War I, he was a lieutenant colonel in the Corps of Engineers in France.



W. H. Puckett (left) retiring president, congratulates Ernest White of Twin Falls, on White's election to the presidency of the Associated General Contractors of Idaho. The group held its annual convention recently at Boise.

Expand central heat at Pittsburgh U.

Extension of a central heating system by installation of new lines connecting structures about 3,000 ft. apart through streets abutting the University of Pittsburgh recently brought engineers the problem of welding red brass pipe.

Twelve-in. and eight-in. steam lines entering the university's Cathedral of Learning were tapped and new underground lines put down to transport the steam to the Presbyterian, Woman's, Eye and Ear and Children's hospitals at the edge of the campus. Provisions were also made for connections to other buildings at a later time. Steam for all the lines is supplied from the existing Bellefield Boiler Plant, which previously supplied only the Cathedral, the Mellon Institute and the Carnegie Library buildings. Total rated capacity of the plant is 235,000 lb. per hr.

The work consisted of laying two 10-in. steam lines, each encased in special 18-in. insulated conduit; a 5-in. brass condensate return, and a 2-in. brass trap discharge return encased in a 15-in. conduit. The three conduits are laid on a concrete base and extend between underground concrete vaults located at right-angle turns and at regular intervals to provide easy access to expansion joints, cross-over connections, and trap connections. The steam lines are designed for 250 lb. and the condensate line for 125 lb.

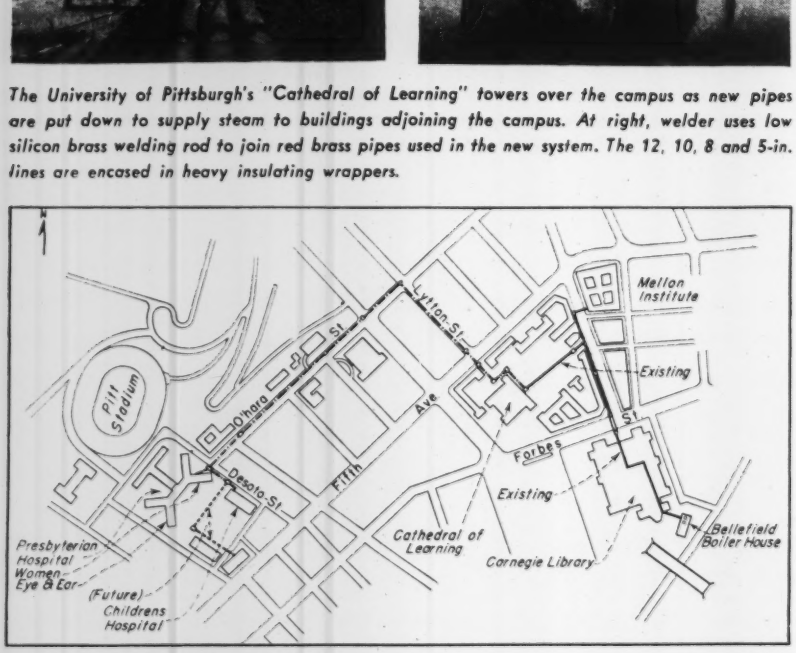
Use of the central system will eliminate small heating plants in each of the hospital units to be served and will be a contribution to the city's continuing drive for abatement of the smoke nuisance.

In the installation of the condensate return lines, a low silicon bronze welding rod (containing about 1.5 percent silicon, 1 percent zinc and the balance copper) was used with good results. Tensile properties of the reinforced weld exceeded the tensile strength of the red brass pipe, with ductility values slightly in excess of 40 percent measured by a free bend test. Non-reinforced welded test samples indicated that a maximum tensile strength of 90 percent of the 40,000-psi. minimum tensile strength of the base metal could be expected at all times as a result of the process.

Red brass pipe has been joined in the past by using an alloy brass welding rod. This process has been termed "bronze welding" or "braze welding."

The insulated conduits were furnished by The Ric-wil Co., and installation was by Dravo Corp., of Pittsburgh.

The University of Pittsburgh's "Cathedral of Learning" towers over the campus as new pipes are put down to supply steam to buildings adjoining the campus. At right, welder uses low silicon brass welding rod to join red brass pipes used in the new system. The 12, 10, 8 and 5-in. lines are encased in heavy insulating wrappers.



A distance of more than 3,000 ft. is covered by the new steam lines at the college. Steam comes from the Bellefield boiler house (lower right) where original lines fed the Cathedral of Learning, Carnegie Library and Mellon Institute. New lines (shown as dotted lines) will supply hospital group at edge of campus.

City's annexation right to be tested in Penna.

One of the first tests of the right of a large municipality to annex land of a neighboring government sub-division in order to expand airport facilities is headed for the present session of the Pennsylvania state legislature. Philadelphia's city council has approved an ordinance to purchase 650 acres in adjoining Tinicum Township, Delaware County, for the present Southwest Airport.

Meanwhile, a group of Delaware County political and civic leaders have expressed strong opposition to the annexation and have announced they would fight a bill to be introduced empowering Philadelphia to purchase the land.

The tract would give the airport a total area of 2,400 acres and is needed under the master plan of developing the airport, according to Thomas Buckley, Philadelphia Public Works Director. The city council has appropriated $5,000,000 for city airport expansion. Philadelphia now is paying $16,500 annually in taxes to Tinicum Township for land used as part of the airport and the proposed new purchase would make the municipality the largest taxpayer in the township.

The state legislature in 1944 authorized annexation by the city but the authorization lapsed two years later. Philadelphia will ask the legislature for a renewed authorization.

Fleming sees $13 billion construction in 1947

The new construction volume in 1947 is expected to total around 13⅓ billion dollars in terms of 1946 prices Maj. Gen. Philip B. Fleming, Administrator of the Federal Works Agency and the Office of Temporary Controls, told the Washington Building Congress Feb. 10. His estimate is conditional on no general business recession and no prolonged strikes holding up the delivery of materials.

This year the construction volume should increase 30 percent over last year, General Fleming predicted. He expects a million new homes to be started with nearly that many completions, with housing accounting for $5.8 billion. The remaining $7½ billion of work predicted for 1947 represents the sum of all non-residential construction, including $1.3 billion for highways, $50 million for airports and $3 billion for other public works.

New guaranteed housing contracts are awarded

Five new contracts for guaranteed markets for factory-built houses were approved last week. The Office of the Housing Expediter said that the Reconstruction Finance Corp. has entered into contracts for production of a total of 30,750 such homes this year, in addition to five contracts awarded in 1946 for a total of 51,400 units.

The largest of the new contracts went to Lustron Corp., Chicago, for production of 14,550 porcelain-enamel steel houses.

Two models will be turned out: the "Esquire," a one-story, two-bedroom bungalow with 988 sq. ft. of floor area, and a stripped-down version of the "Esquire," plans for which are to be completed within a month.

Production of the Esquire is to start at once in the Curtiss-Wright airplane plant at Columbus, Ohio—space that has been made available to Lustron as part of the government arrangement. The project will be financed by a 20 percent equity contribution by Lustron, a $3,500,000 privately-floated loan and a $12,500,000 RFC loan.

A model of the "Esquire" has been built by the parent company, Chicago Vitreous Enamel. Wall, partition, ceiling and roof construction consist of rolled steel framing to which is attached, front and back, porcelain-enamel sheets that come in 12 basic colors.

The house, 35x32 ft., will be shipped f.o.b. factory for about $4,200.

Award 2 contracts for 1000-bed VA hospitals

Award of architect-engineer contracts for the 1000-bed Veterans' hospitals to be built at Syracuse, N. Y., and Philadelphia, Pa., was announced last week by the Army's Corps of Engineers.

The Syracuse job went to Marcus T. Reynolds of Albany, N. Y., with whom are associated Sargent, Webster, Crenshaw and Folley of Albany and William E. Hogart of New York City. The Philadelphia contract was awarded to George W. Pepper of Philadelphia.

President outlines construction controls

During the remainder of 1947 it will be necessary for the federal government to retain some controls on what types of construction may be started, the President reported to Congress in a Feb. 3 message asking for limited extension of his war powers. He also said that he felt that it would be necessary to continue assistance to the producers of some building materials.

In contrast, the President reported that Title III of the Second War Powers Act need not be extended beyond March 31 to aid housing construction, although he asked that this power be continued for other reasons. He said that if it became necessary to put back in force priority controls on the distribution of building supplies and facilities to aid housing this could be done under the Veterans Emergency Housing Act passed last year.

MAJOR MEETINGS

Associated Equipment Distributors, 28th annual meeting, Edgewater Beach Hotel, Chicago, Ill., Feb. 13-15.

American Road Builders Association, annual convention, Palmer House, Chicago, Ill., Feb. 17-21.

American Concrete Pipe Association, annual national convention, Statler Hotel, St. Louis, Mo., Feb. 23-25.

American Concrete Institute, 43rd annual convention, Netherlands Plaza Hotel, Cincinnati, Ohio, Feb. 24-26.

National Council for Stream Improvement, annual meeting, Waldorf Astoria Hotel, New York, N. Y., Feb. 24-26.

American Society for Testing Materials, Committee Week, Benjamin Franklin Hotel, Philadelphia, Pa., Feb. 24-28.

Association of Highway Officials of the North Atlantic States, 23rd annual meeting, Hotel Traymore, Atlantic City, N. J., Feb. 26-28.

Mississippi Valley Conference of State Highway Departments, 38th annual meeting, Edgewater Beach Hotel, Chicago, Ill., Mar. 14-15.

Army engineers start Delaware River work

U. S. Engineers get funds for project —Begin dredging survey in Niagara Engineer District

Full-scale dredging of the Delaware River has been resumed by the U. S. Army Engineers, ending fears that the river might eventually be closed to heavy shipping because of mud shoals.

Col. Frederick F. Frech, District Engineer, has announced that the government has restored dredging funds to their normal $3,000,000 a year, a figure which had been reduced about one-third in an economy move last August. He said the action would enable clearance of the Delaware channel to its normal depth of 37 ft.

The mud shoals that have reduced depth of the river channel by two ft. in the last four months, had forced larger vessels to time their entries with high tides.

Colonel Frech said the retrenchment forced the U. S. District Engineers to take three of their seven dredges out of service on the Delaware channel project. Colonel Frech said the government has resumed full-scale dredging of the Schuykill River and the Wilmington harbor and will start work soon to deepen the port Richmond anchorage which project had been suspended.

Little Niagara River survey

Survey work for the proposed dredging of Little Niagara River near Niagara Falls will begin early this spring or whenever weather conditions permit, Harry Schwarzmueller, field engineer of the U. S. Corps of Engineers, Buffalo, N. Y., district, has told members of the advisory board of Harbor Commissioners and city officials of Niagara Falls, N. Y.

It was explained that the plan for widening and deepening the Little River calls for dredging the stream from 8 to 10 ft. deeper along its entire length from upper Cayuga Island, and also for widening the entrance.

Railroad plans air center to serve Montreal

The Canadian National Railways has let a contract to the Dominion Bridge Co. for the steel work of a new aviation terminal and office building to be built on the northeast corner of the Central Station at Montreal.

The building will house the International Air Transport Association and the Provincial International Civil Aviation Organization.

ENGINEERING SCHOOL NEWS

New humanities courses at North Carolina—Hydraulic tester at Washington—Solar heat studies at M. I. T.—Faculty changes

To provide students with a "thorough" cultural background, a new 4-year bachelor's degree program—offering broad studies in the humanities while retaining sound instruction in engineering fundamentals, and also a fifth year of specialized graduate work—have been adopted by the North Carolina State College School of Engineering at Raleigh, N. C. Dean J. H. Jampe said that the revised curricula will go into effect next fall. The program is being adopted as the result of more than a year of study by a special planning committee of faculty members.

The principal objectives of the 4-year program, the dean says, are:

"To maintain with our engineering curricula an adequate foundation in the basic courses in mathematics, physics, chemistry, and mechanics.

"To broaden the training of students by studies in the humanities, and to instill good habits in the use of English.

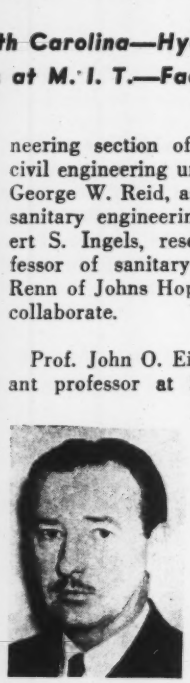
"To give introductory knowledge of a specific engineering field, in a degree granting department, and to include the necessary material from allied technical fields."

Under the new plan, 50 hours of humanities study will be required, and the effectiveness of the program in the humanities and social science will be evaluated periodically, and any changes dictated by experience will be recommended.

The University of Washington will shortly receive a 500,000-lb. hydraulic testing machine for its new civil engineering building, according to Prof. Burt F. Farquharson, director of the university's engineering experiment station. Construction of the machine has been completed at the Baldwin locomotive plant in Philadelphia. The machine, to be used in testing bridge timbers, airplane wings and other structures, can handle objects 85 ft. long, 20 ft. high and 10 ft. wide. The cost is estimated at $140,000.

One of the first non-medical grants by the U. S. Public Health Service has been made through the National Institute of Health to Georgia Tech for a 3-year project on fundamental research in water and sewage analysis. About $20,000 has been made available for the first year's work. The project will be conducted in the new sanitary engineering section of the department of civil engineering under the direction of George W. Reid, associate professor of sanitary engineering, assisted by Robert S. Ingels, research associate professor of sanitary chemistry. C. E. Renn of Johns Hopkins University will collaborate.

Prof. John O. Eichler, former assistant professor at Syracuse University and civil engineering and highway designer for New York State, has been appointed assistant professor of civil engineering at the Cooper Union School of Engineering. He will be in charge of surveying courses, including those given at the school's Green Engineering Camp in New Jersey. He will also teach photogrammetry, on which he has published several papers, and courses related to highway construction.



Massachusetts Institute of Technology engineers are trying to capture enough heat from solar radiation to warm the average house in any kind of climate and, eventually, to provide industrial power. There is a "heat-trap" in a 1-story structure on the Cambridge bank of the Charles River. The bait is composed of ordinary tin cans filled with salt and water. The building has celotex walls and refrigerator doors on three sides, and double-paned windows in the south side to catch the sun's rays.

The heat-trap is dependent upon stacks of 2-quart and gallon-sized tin cans inside the south wall of glazed glass. As the heat rays penetrate the glass, they are transmitted to the metal cans and absorbed by the water and melting salt inside. The liquid holds the heat in storage for re-radiation into the rooms long after the sun has gone down. There are seven compartments in the 50 by 14-foot structure.

A special solar energy committee of the institute will make several simultaneous tests of glass thicknesses, can sizes, and the types of chemicals or liquid capable of sponging up the sun's heat. The committee will attempt to prove that the conventional domestic heating system can be eliminated. The research is backed by a $650,000 gift from Godfrey C. Cabot of Boston.

William W. Hay, Warren, Pa., has been appointed professor of railway civil engineering at the University of Illinois. Mr. Hay, who received his bachelor's degree from the Carnegie Institute of Technology in 1931, was chief engineer of the Korean railways from September, 1945, until April, 1946.

Two members of the college of engineering faculty at the University of Idaho have resigned. Herman Blickensderfer, associate profesor of civil engineering, goes to Bradley University and H. R. Wilson, instructor in civil engineering, joins an engineering firm in Portland, Ore.

Georgia Tech is offering a course in industrial sanitation to acquaint students who will take managerial and engineering positions in industries with the rudiments of employee health. Thirty-six meetings over a period of twelve weeks will be held at which lectures will deal with problems of plant sanitation and employee health.

Values of undergraduate scholarships at Lehigh University have been increased. Effective with the 1947-48 academic year, ten annual competitive regional scholarships will be awarded on the basis of $600 for an academic year, an increase of $200. Eighty general-tuition scholarships, as well as several other awards formerly valued at $400 each per year, are to be granted hereafter on the basis of the total tuition cost for the student.

The civil engineering department, University of Illinois, has agreed to undertake comprehensive research on drainage of superhighways for the state and federal governments, starting March 1, continuing until June 30, 1948, perhaps indefinitely. Prof. J. J. Doland will be in charge. Prof. W. C. Huntington is head of the department. The first application of information gained is expected to be in connection with the proposed Congress Street superhighway in Chicago.

Lisle A. Rose, Houghton, Mich., has been named editor of engineering publications at the University of Illinois, with the rank of associate professor. He received his bachelor's, master's and doctor's degrees from the University of Chicago and was on the faculty there from 1926 to 1928.

OBITUARY

John Crosbie Brackenridge, 83, a former Commissioner of Public Works in Brooklyn, N. Y., who, as an engineer, pioneered in the construction of much of the railway system of that borough, died Feb. 2. Mr. Brackenridge was chief engineer, general manager and a director of the old Brooklyn Rapid Transit Railroad, predecessor of the B. M. T. lines. He was largely responsible for the development of that system and for providing the transit crossing on the Brooklyn Bridge. He served as commissioner of public works from 1904 to 1906. He was consulting engineer to many railways serving New York City.

Julian C. Hills, 73, former city engineer at Bellingham, Wash., died there Jan. 22. He studied engineering at the University of Minnesota and began his professional career with the Great Northern Railroad, serving for 19 years in the territory from Minneapolis to Vancouver, B. C. From 1906 to 1909 he built a rail line from Blaine, Wash., to New Westminster, and another in the Real River district of Canada. After two years in private engineering work at New Westminster, he became city engineer at Blaine, moving to Bellingham in 1917 as assistant Whatcom County engineer. He was elected county engineer the following year. After five years he became Bellingham city engineer, a post he held until his retirement in 1935.

George S. Clark, 78, Alabama State Highway department civil engineer, died Jan. 28 at Birmingham.

Edgar L. Ford, 79, Skowhegan, Me., road building contractor, died Jan. 28. Mr. Ford had served as road commissioner from 1893 to 1895 and from 1910 to 1916. As a civil engineer he was partner of the late Elmer E. Greenwood in Greenwood & Ford. He was also a partner in the firm of Ford & Smiley, civil engineers.

William B. McCaleb, 84, former general superintendent of water service of the Pennsylvania Railroad, died recently in Harrisburg, Pa. He retired in 1932 after 52 years of service with the railroad. He had been assistant division engineer, division superintendent, and finally advanced in 1929 to the superintendency of water service.

William Naylor McDonald, 77, of Jacksonville, Fla., retired civil engineer and former city manager of St. Petersburg, Fla., died recently.

Calvin B. Felger, 50, associate engineer in the Nebraska department of roads and irrigation, died on Feb 5 in Lincoln. He served in World War I and was graduated from Purdue University in 1924 with a B.S.C.E. degree. He had been with the Nebraska department since 1936.

Walter Paschall Phillips, 55, of Darien, Ga., formerly of Atlanta, and one-time engineer with the State Highway Department, died Jan. 29.

William C. Klingelhoefer, 83, former resident of Mascoutah, Ill., died recently in Beaver, Pa. Until his retirement in 1931, he was an engineer with the American Bridge Co.

George W. Carr, 54, engineer, died at West Palm Beach, Fla., Jan. 29. Mr. Carr planned the Morrison Army Air Field at West Palm Beach and laid out several south Florida cities during the building boom of the 1920's.

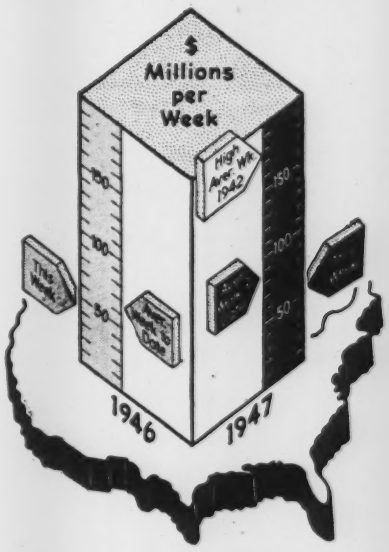
Archibald Gardner, 63, retired Toledo, Ohio, consulting engineer, died Jan. 24. He went to Toledo 20 years ago to join A. Bentley & Sons Co. as consulting and hydraulic engineer, retiring five years ago.

Harold E. Hawxhurst, 68, civil engineer and commissioner of public works of Old Westbury, N. Y., died Jan. 30.

Alexander S. Forster, 67, senior partner in Forster, Wernert & Taylor, an engineering company, died Jan. 25 at Toledo, Ohio. Mr. Forster began his career as a member of the Toledo engineer's office. Later he was engineer with the American Bridge Co. and the Toledo Bridge & Crane Co.

Henry Hobart Porter, 81, chairman of the board of the American Water Works and Electric Co., and a life trustee of Columbia University, died in New York, Feb. 9. He had special success in reorganization of utility enterprises, including the former American Water Works & Guarantee Co. and the Brooklyn City Railroad. In 1896, with E. N. Sanderson he formed the firm of Sanderson & Porter, one of the earliest firms of consulting engineers, which designed and constructed oil pipe lines in the Mid-continent and California fields, making the first survey of the feasibility and economy of transporting gasoline long distances by pipe lines.

CONSTRUCTION ACTIVITY



As Reported this week to . . .
Engineering News-Record

CONTRACT VOLUME

Continental U. S. Only
(Thousands of Dollars)

	Week of Feb. 13 1947	Cumulative 1947 (7 wks.)	Cumulative 1946 (7 wks.)
Federal	$4,066	$56,568	$49,232
State & Mun.	17,146	149,107	97,404
Total Public.	$21,212	$205,675	$146,636
Total Private	33,566	391,619	301,226
U. S. Total..	$54,778	$597,294	$447,862

WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

Dollar Volume (Thousands)

Type of Work	This Week	Cumulative 1947 (7 wks.)	Cumulative 1946 (7 wks.)
Waterworks	$1,272	$16,681	$7,104
Sewerage	1,339	13,583	4,044
Bridges	1,907	16,037	14,069
Highways	7,898	58,134	50,199
Earthwork, Waterways	776	10,024	28,603
Buildings, Public.	3,274	62,637	32,614
Industrial	7,530	112,986	130,423
Commercial ...	23,095	252,061	153,834
Unclassified	7,687	55,151	26,972

NOTE: Minimum size projects included are: Waterworks and waterway projects, $22,500; other public works, $40,000; industrial buildings, $55,000; other buildings, $205,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1947 (7 wks.)	Cumulative 1946 (7 wks.)
NON-FEDERAL	$134,202	$130,321
Corporate Securities	11,968	59,978
State and Municipal	122,234	70,343
FEDERAL	.....	158,320
Total Capital	$134,202	$288,641

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost..	Feb. '47	390.76	187.84
Building Cost.....	Feb. '47	297.38	160.75
Volume	Jan. '47	195	86

CONSTRUCTION REPORTS

Bids Asked — Low Bidders — Contracts Awarded

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

ELSIE EAVES, Manager *J. A. MAHONEY, Reports* *J. V. McEWEN, M. R. ROESSLER, Statistics*

WATER SUPPLY

Construction Reports received since this section went to press will be found in Last Minute Construction Reports.

BIDS ASKED

Bids Asked February 18

†**D. C., Wash.**—U. S. Eng., First and Douglas Sts. N. W., Zone 25, 16 in. pipeline, Hobart St. to Court No. 2, Washington Aqueduct, McMillan Filtration Plant, Serial No. 49-980-47-19 (3)C.

N. J., Highlands—Mayor and Highlands Boro Council, City Hall, 171 Bay Ave., installing water plant, incl. 2 deep wells with pumps, electric motors, piping, pits, valves, starters, switches, etc., 2 pressure iron removal tanks with valves, piping meters, motors, pumps, etc., 1 cinder block bldg. Mrs. E. Kwik, boro clk.

N. Y., New York—Comr. Water Supply, Gas & Electricity, Municipal Bldg., Zone 7, watermains, appurtenances in Avenue B, Ralph and Remsen Aves., E. 56 and E. 88 Sts. and Kings Hy., Brooklyn Boro. Plans deposit $1.

Bids Asked February 19

Pa., Harrisburg—Penna. Dpt. Property & Supplies, Capitol Bldg., erecting boilers, equip. and constructing raw water sys. for Selinsgrove State Colony for Epileptics in Selinsgrove. $200,000. Bids 12/18 rejected. Gannett, Flemming, Corddry & Carpenter, Inc., 600 N. Second St., archts. A. J. Warlow, c/o owner, ch. engr. CD 11/15—ENR 1/23, LB, under Pa., Selinsgrove.

Bids Asked February 25

N. Y., New York—Bd. Water Supply, 120 Wall St., Zone 5, Contr. 382, furnishing, testing, del. ten 72x47½ in., four 60x42 in., two 72x54 in. and one 24x19½ in. bronze nozzle type Venturi meters, two 84x72 in. x 60x54 in. bronze rectangular Venturi meters, instrument assemblies, water level equip., elctric cables and appurtenances for Rondout, West Branch and Kensico South effluent chambers of Delaware Aqueduct. Plans deposit $5. Extended date. CD 1/20—ENR 1/23.

Bids Asked March 4

Tex., Amarillo—Office A. P. Hancock, city mgr., 5 m. g. rein.-con. Water Storage Reservoir 5, appurtenances. $250,000. Freese & Nichols, 407 Danciger Bldg., Fort Worth, engrs. CD 9/11—ENR 10/3.

Bids Asked

Tenn., Dover—Dover Utilities Dist. of Stewart Co., c/o W. V. Howard, chn., WW imprvs. Over $22,500. C. N. Harrub Eng. Co., 711 American Bank Bldg., Nashville, Zone 3, engr.

LOW BIDDERS

Conn., Hartford — Hartford Metropolitan Dist., Water Bureau Bd. Contr. & Supply, 650 Main St., Jan. 27, cleaning, grubbing West Side Barkhamsted Reservoir, Hartland-Barkhamsted. Contr. 120, from Wyoming Valley Co., Wyoming Pa., **$71,850**; East Side of Barkhamsted Reservoir, Hartland-Barkhamsted, Contr. 119, from Gil Wyner Co., 22 Pierce St., Malden, Mass., **$54,000**. CD 1/14—ENR 1/16.

Pa., Coatesville—City, addnl. water facilities, incl. pump. station, from E. A. Taylor, P. O. Box 551, **$22,900**. CD 10/22/45—ENR 11/1/45.

Tex., Fort Worth—City, rejected bids, repairing, imprv. 4 steel water storage tanks and standpipe. L. B. **$22,500**. CD 1/15—ENR 1/23, under LB.

Tex., San Antonio—C. L. Browning, Jr., 12 Insurance Bldg., about Feb. 4, 6 and 8 in. c.i. waterlines, appurtenances, from G. W. Dickerson, 1543 W. Kings Hy. **$23,084**. CD 1/31—ENR 2/6.

Tex., Tahoka—City, Jan. 28, water storage and pump. unit, from Clovis Contg. Co., Clovis, N. M. **$31,038**. Est. $35,000. Hasie & Green Eng. Co., Box 1139, Lubbock, engr.

Que., St. Sauveur Des Monts—Town, A. Belanger, secy., Jan. 27, installing, supplying approx. 11,000 ft. 6 in. and 7,000 ft. 8 in. pipe, from LaSalle Paving Co. Ltd., Victoriaville. Approx. **$73,000**. CD 1/22.

CONTRACTS AWARDED

La., Welsh—Town, water filtration plant, to Raborn & Burnett, P. O. Box 2102, Baton Rouge, **$61,534**. Bids 1/30. CD 1/14—ENR 1/16.

Tex., Childress—City, c/o Whitt Johnson, 4 in. steel water pipe lines, force account. **$28,000**. CD 1/21—ENR 1/23.

Man., Brandon—City, altering WW plant, day labor, **$110,000**. Wm. Scott, 188 Montrose St., Winnipeg, engr. CD 8/24/45 — ENR 9/13/45.

SEWERS, WASTE DISPOSAL

Construction Reports received since this section went to press will be found in Last Minute Construction Reports.

BIDS ASKED

Bids Asked February 20

Conn., Stamford—City, Town Hall, at office Neilson D. Dale, Comr. Finance, stormwater and sanitary sewers Proj. 1 Atlantic St. and Proj. 2, W. Main St. Plans deposit $25. CD 2/1—ENR 2/21.

Pa., Selinsgrove—Selinsgrove Sewerage Auth., Snyder Co., sewage treatment plant. Plans deposit $20. Richard J. Harman, 222 N. Third St., Harrisburg, consult. engr. CD 1/22/46—ENR 2/7/46.

Bids Asked March 26

Pa., Phila.—Dpt. P. Wks., Bureau Eng., Surveys & Zoning, Thomas Buckley, dir., City Hall Annex, Northeast Sewage Treatment works, settling and aeration tanks, main conduits and appurtenant work, Schedule A, excavation and constr., Constr. SD 104 NE. Plans deposit $10. CD 3/1—ENR 3/21.

Bids Asked

Que., St. Adele—J. E. Saune, village secy., supplying 11,000 ft. 6-to 42-in. rein.-con. pipe and fittings for sewers. Approx. $150,000. Lalond & Valois, Canada Cement Bldg., Montreal, engrs.

LOW BIDDERS

Ill., Chicago—Sanitary Dist. of Chicago, 910 S. Michigan Ave., Jan. 30, Southwest Sewage Treatment Works, Contr. 46-22, in Stickney, air compressors, etc., from James H. McCauley & Sons, Inc., 5620 W. 65 St., **$126,570**; control centers, push button station, magnetic contactors, etc., from Northern States Co., 33 N. LaSalle St., **$64,740**. CD 1/25—ENR 1/30.

Ill., Knoxville—City, City Hall, rejected bids Jan. 14, Sect. B sewerage treatment plant and connections. LB. **$130,000**. CD 12/17—ENR 12/19.

N. Y., Ballston Spa—Bd. Trustees, Village Hall, Feb. 4, sewage treatment plant, from Waggaman & Collyer, Glens Falls. **$61,168**. CD 1/9—ENR 1/16.

Tex., San Antonio—C. L. Browning, Jr., 812 Insurance Bldg., sanitary sewer lines, from G. W. Dickerson, 1543 W. Kings Hy. **$41,148**. CD 1/31—ENR 2/6.

PROJECTS COVERED

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks $22,500; other public works $40,000; industrial buildings $55,000; other buildings $205,000.

Classes of Construction

(Name in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings
Unclassified

Stages Reported

PROPOSED WORK: Including appointment of engineers or architects.

BIDS ASKED (new announcements only). For full calendar, see also preceding issues of ENR.;

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

Symbols and Abbreviations Include:

† Federal Government
★ Project of $1,000,000 or over.
ENR Engineering News-Record
CD Engineering News-Record Construction Daily

CONTRACTS AWARDED

Fla., Daytona Beach—City, Sect. 1, revised storm sewer proj., to Girvin & White Co., 1226 W. Forsythe St., Jacksonville **$289,000**. CD 11/8—ENR 11/14, under LB.

Ill., Knoxville—City, City Hall, Sect. A sewers and sewerage imprvs., to Collignon Constr. Co., Kahl Bldg., Davenport, Ia. **$164,110**. Bids 1/14. CD 12/17—ENR 12/19.

Tex., Canadian—City, Jess B. Lindley, mayor, sewer collection lines, manholes, cleanouts, etc. and sewage disposal plant, to Park Owens Constr. Co., Pampa. **$79,781**. CD 1/21.

Que., Cowansville—Town, installing sewerage sys., to Lebel Constr. Co. Ltd., 5571 Canterbury Ave., Montreal. Approx. **$53,000**.

BRIDGES

Construction Reports received since this section went to press will be found in Last Minute Construction Reports.

BIDS ASKED

Bids Asked February 18

South Carolina — State Hy. Dpt., J. S. Williamson, comr., Columbia, 80 ft. rein.-con. bridge over McLeod's Mill Creek near Rembert, U. S. Route 521, S. C. Docket 43.263 — Scheme 1; quadruple 12x10 ft. rein.-con. culvert at McLeod's Mill Creek near Rembert, U. S. Route 521, S. C. Docket 43.263—Scheme 2; 82 ft. rein.-con. structural steel, treated timber bridge over McLeod's Mill Creek near Rembert, U. S. Route 521, S. C. Docket 43.263—Scheme 3, all foregoing Sumter Co.

Bids Asked February 19

Louisiana—Police Jury, Lafourche Parish Courthouse, Thibodaux, 71 ft. vertical lift, four 25 ft. and two 30 ft. steel beam, concrete deck span bridge, on timber pile bents over Bayou Lafourche, S. P. 713-00-32, at St. Charles Plantation between Raceland and Thibodaux. Plans deposit $25. G. P. Rice, 324 Audubon Bldg., New Orleans, engr.

Bids Asked February 21

Kansas—State Hy. Dpt., Minneapolis, Br. 18.1 three 7x5x62 ft. rein.-con. box Proj. F-287E (3); Br. 17.9, three 20x8x10 ft., Proj. F287E (3), both McPherson Co.; Br. 19.3, 30x40x40x30 ft. rein.-con. slab Proj. FA 481B (3), Rt. 1, Ottawa Co., R. C. Keeling, Tojeka, State hy. engr.

Vermont—State Hy. Dpt., Montpelier, widening bridge abutments and constructing rein.-con. slab superstructure on Route 11, 266 ft. long, in Springfield. Plans deposit $2.

Bids Asked February 24

Ontario—J. D. Millar, deputy minister Dpt. Hys., Toronto, steel superstructure for Tansley Bridge on Hy. 5 near Hamilton. Approx $125,000.

Bids Asked February 26

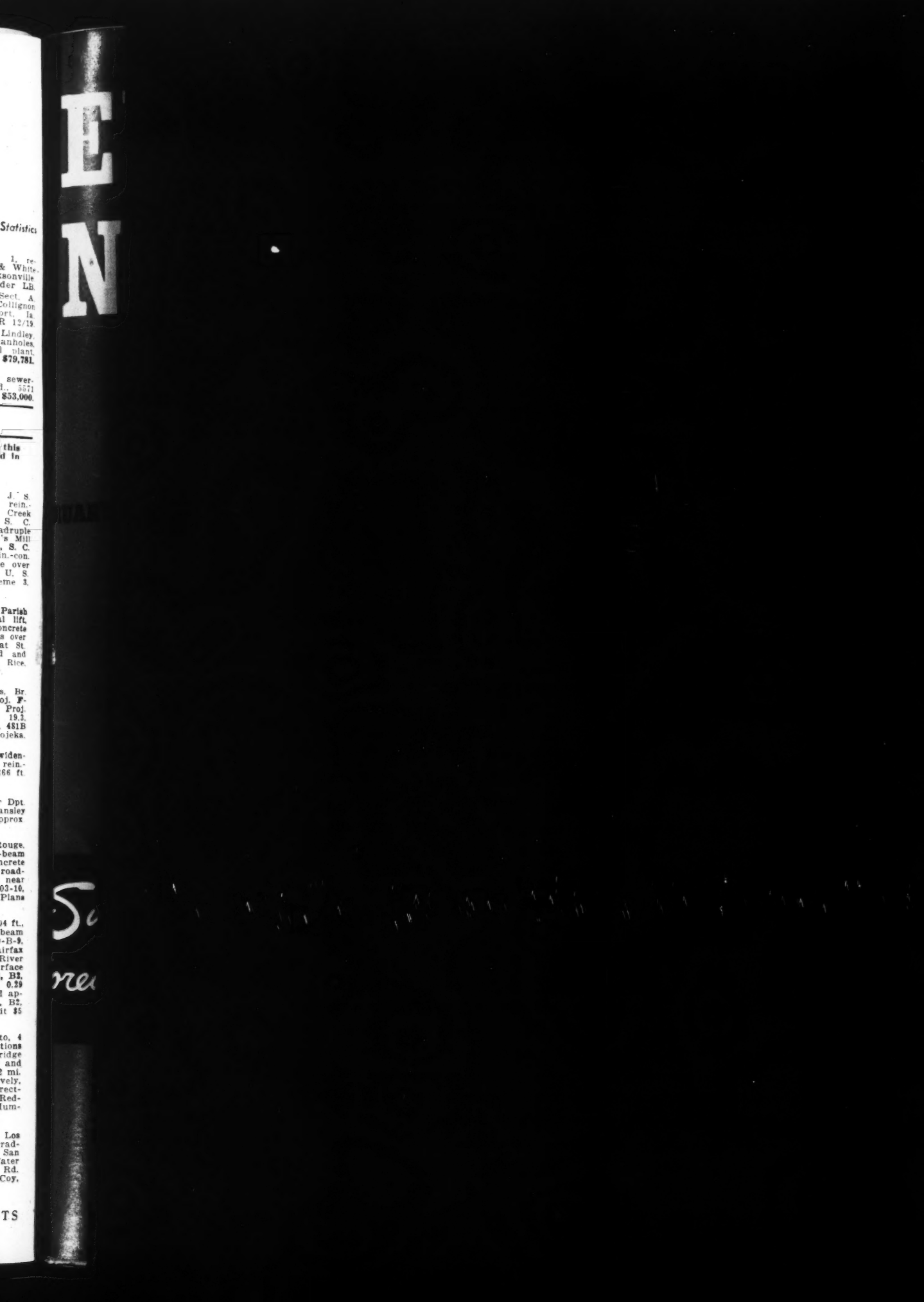
Louisiana—State Dpt. Hys., Baton Rouge, 0.092 mi. Cane River Bridge nine 50 ft. I-beam spans supported on steel H piles with concrete arch and two 20 ft. approach slabs 30 ft. roadway with two 1 ft. 6 in. walkways, near Cloutierville, State Route 20, S.P. 53-03-10, F.A.S.P., S-310 (2) Natchitoches Parish. Plans deposit $2.

Bids Asked February 27

Virginia—State Hy. Dpt., Richmond, 104 ft., 207 ft., 118 ft. and 167 ft. rein.-con. beam spans, Route 350, SP SN-U-FAP-1400-B-9, 10, 11, 12, FP SN-U-FAP-87 (4), (5), Fairfax Co.; bridges over Big and Little Otter River and 1.36 mi. traffic bound macadam surface treating, Route 297, SP 1323-H5, B1; H6, B2, FP S07 (2), Bedford Co.; overpass and 0.29 mi. waterbound macadam surface treated approaches Route 70, SP FAGH-1127- AR1, B2, FP FAGH-534-(4), Lee Co. Plans deposit $5 each.

Bids Asked March 5

California—State Div. Hys., Sacramento, 4 bridges and 11 culverts at various locations between Adin and Alturas, Modoc Co.; bridge and underpass across Cottonwood Creek and under tracks Southern Pacific Co. about 2 mi. and 5.5 mi. north of Hornbrook respectively, Siskiyou Co.; removing timber span and erecting salvaged structural steel span across Redwood Creek about 30 mi. east of Eureka, Humboldt Co. G. T. McCoy, state hy. engr.

Bids Asked March 6

California—State Div. Hy., State Bldg., Los Angeles, 2 steel beam span bridges and grading, plant mix surfacing 2.7 mi. at San Timoteo Creek and Santa Ana River on Water Man Ave. between Riverside-Redlands Rd. and Mill St., San Bernardino Co. G. T. McCoy, Sacramento, state hy. engr.